



**Ventura County
Air Pollution
Control District**

669 County Square Drive
Ventura, California 93003

tel 805/645-1400
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www.vcapcd.org

**Michael Villegas
Air Pollution Control Officer**

October 29, 2018

Carol Sutkus, Manager
South Coast Air Quality Planning Section
Air Quality Planning and Science Division
Air Resources Board
P.O. Box 2815
1001 I Street
Sacramento, CA 95812

RE: Amendments to Rule 74.20, Adhesives and Sealants

Dear Ms. Sutkus:

Enclosed you will find the recent adoption of proposed amendments to Rule 74.20, which was adopted by our Board on October 9, 2018. I am attaching a strikeout underline copy and a clean copy of Rule 74.20. Rule 74.20 reduces the Reactive Organic Compound (ROC) emissions from the use of adhesives and sealants.

I am also including the Certified Minuted Board Letter, CEQA Transmittal Letter, Hearing Notice, Completeness Checklist, Rule Evaluation Form, and Staff Report. Please submit Rule 74.20 submittal package to the Environmental Protection Agency as an amendment to the State Implementation Plan.

If you have any comments or questions regarding this matter, please contact me at (805) 645-1408.

Sincerely

A handwritten signature in blue ink that reads "Stan Cowen".

Stan Cowen
VCAPCD Air Quality Engineer
Rule Development Section

CALIFORNIA AIR RESOURCES BOARD

SIP COMPLETENESS CHECKLIST
(Electronic Format)

*** TO BE COMPLETED BY DISTRICT AND RETURNED TO ARB ***

All rules submitted to the EPA as State Implementation Plan (SIP) revisions must be supported by certain information and documentation for the rule packages to be deemed complete for review by the EPA. Rules will not be evaluated for approvability by the EPA unless the submittal packages are complete. To assist you in determining that all necessary materials are included in rules packages sent to the ARB for submittal to the EPA, please fill out the following form and include it with the rule package you send ARB. See the ARB's Guidelines on the Implementation of the 40 CFR 51, Appendix V, for a more detailed explanation than is provided here. Adopted rules and rule amendments should be checked against U.S. EPA's Guidance Document for Correcting Common VOC & Other Rule Deficiencies (Little Blue Book, August 21, 2001) to ensure that they contain no elements which will result in disapproval by EPA.

District: Ventura County Air Pollution Control District

Rule No: Amended Rule 74.20

Rule Title: Rule 74.20, Adhesives and Sealants

Date Adopted or Amended: October 9, 2018

ADMINISTRATIVE MATERIALS

Note: All documents should be in electronic format. Items that have signatures, initials, or stamps may be scanned.

<u>Attached</u>	<u>Not Attached</u>	<u>N/A</u>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>COMPLETE COPY OF THE RULE:</u> Provide an unmarked copy of the entire rule as adopted or amended by your District Board.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>UNDERLINE AND STRIKEOUT COPY OF THE RULE:</u> If an amended rule, provide a complete copy of the rule indicating in underline and strikeout format all language which has been added, deleted, or changed since the rule was last adopted or amended.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>COMPLETE COPY OF THE REFERENCED RULE(S):</u> For any rule which includes language specifically referencing another rule, a copy of that other rule must also be submitted, unless it has already been submitted to EPA as part of a previous SIP submittal.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>PUBLIC NOTICE EVIDENCE:</u> Include a copy of the local newspaper clipping certification(s), stating the date of publication, which must be at least 30 days before the hearing. As an alternative, include a copy of the actual published notice of the public hearing as it appeared in the local newspaper(s). In this case, however, enough of the newspaper page must be included to show the date of publication. The notice must specifically identify by title and number each rule adopted or amended.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>RESOLUTION/MINUTE ORDER:</u> Provide the Board Clerk certified resolution or minute order. This document must include certification that the hearing was held in accordance with the information in the public notice. It must also list the rules that were adopted or amended, the date of the public hearing, and a statement of compliance with California Health and Safety Code Sections 40725-40728 (Administrative Procedures Act).
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>PUBLIC COMMENTS AND RESPONSES:</u> Submit copies of written public comments made during the notice period and at the public hearing. Also submit any written responses prepared by the District staff or presented to the District Board at the public hearing. A summary of the public comments and responses is adequate. If there were no comments made during the notice period or at the hearing, please indicate N/A to the left.

CALIFORNIA AIR RESOURCES BOARD

SIP COMPLETENESS CHECKLIST
(Electronic Format)

TECHNICAL MATERIALS

<u>Attached</u>	<u>Not Attached</u>	<u>N/A</u>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>RULE EVALUATION FORM:</u> See instructions for completing the Rule Evaluation Form and the accompanying sample form.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>NON-EPA TEST METHODS:</u> Attach all test methods that are referenced in your rule that do not appear in 40 CFR 51, 60, 61, 63, or have not been previously submitted to EPA. EPA methods used in other media such as SW846 for solid waste are not automatically approved for air pollution applications. Submittal of test methods that are not EPA-approved should include the information and follow the procedure described in Region 9's "Test Method Review & Evaluation Process."
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>MODELING SUPPORT:</u> Provide if appropriate. In general, modeling support is not required for VOC and NOx rules to determine their impacts on ozone levels. Modeling is required where a rule is a relaxation that affects large sources (≥ 100 TPY) in an attainment area for SO ₂ , directly emitted PM ₁₀ , CO, or NO _x (for NO ₂ purposes). In cases where EPA is concerned with the impact on air quality of rule revisions which relax limits or cause a shift in emission patterns in a nonattainment area, a reference back to the approved SIP will be sufficient provided the approved SIP accounts for the relaxation and provided the approved SIP used the current EPA modeling guidelines. If current EPA modeling guidelines were not used, then new modeling may be required.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>ECONOMIC AND TECHNICAL JUSTIFICATION FOR DEVIATIONS FROM EPA POLICIES:</u> The District staff report or other information included with the submittal should discuss all potential relaxations or deviations from RACT, RACM, BACT, BACM, enforceability, attainment, RFP, or other relevant EPA requirements. This includes, for example, demonstrating that exemptions or emission limits less stringent than the presumptive RACT (e.g., a CTG) meet EPA's 5 percent policy, and demonstrating that all source categories exempted from a RACM/BACM rule are de minimus according to EPA's RACM/BACM policy.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>ADDITIONAL MATERIALS:</u> Provide District staff reports and any other supporting information concerning development of the rule or rule changes. This information should explain the basis for all limits and thresholds contained in the rule.



MINUTE ORDER

VENTURA COUNTY AIR POLLUTION CONTROL BOARD

KELLY LONG, SUPERVISOR, COUNTY OF VENTURA – CHAIR
MIKE MORGAN, COUNCIL MEMBER, CITY OF CAMARILLO – VICE CHAIR
STEVE BENNETT, SUPERVISOR, COUNTY OF VENTURA
CARRIE BROGGIE, COUNCIL MEMBER, CITY OF FILLMORE
PETER C. FOY, SUPERVISOR, COUNTY OF VENTURA
LINDA PARKS, SUPERVISOR, COUNTY OF VENTURA
DAVID POLLOCK, COUNCIL MEMBER, CITY OF MOORPARK
CARMEN RAMIREZ, COUNCIL MEMBER, CITY OF OXNARD
JONATHAN SHARKEY, COUNCIL MEMBER, CITY OF PORT HUENEME
JOHN C. ZARAGOZA, SUPERVISOR, COUNTY OF VENTURA

October 9, 2018 at 1:30 p.m.

Public Hearing Regarding Adoption of Proposed Amendments to Rule 74.20, Adhesives and Sealants; Find That the Adoption of Amended Rule 74.20 is Categorically Exempt from California Environmental Quality Act (CEQA); Approval of, and Adoption of, the Proposed Legislative Findings for Amended Rule 74.20; and Direct the Air Pollution Control Officer, or His Designee, to File a CEQA Notice of Exemption Pursuant to CEQA Guidelines Section 15062.

- (X) All Board Members are present, except Board Members Broggie and Foy.
- (X) The Board holds a public hearing.
- (X) The following persons are heard: Michael Villegas and Stan Cowen.
- (X) Upon motion of Board Member Ramirez, seconded by Board Member Pollock, and duly carried, the Board hereby approves staff recommendations as stated in the Board letter.

I hereby certify that the annexed instrument is a true and correct copy of the document which is on file in this office.

MICHAEL POWERS,
Clerk of the Air Pollution Control Board,
County of Ventura, State of California.

Dated: October 29, 2018

By: Jessica Kam
Deputy Clerk of the Board



By: Jessica Kam
Deputy Clerk of the Board



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Michael Villegas
Air Pollution Control Officer

October 9, 2018

Air Pollution Control Board
800 South Victoria Avenue
Ventura, CA 93009

SUBJECT: PUBLIC HEARING TO CONSIDER ADOPTION OF PROPOSED
AMENDMENTS TO RULE 74.20, ADHESIVES AND SEALANTS; FIND
THAT ADOPTION OF PROPOSED AMENDMENTS IS EXEMPT FROM THE
CALIFORNIA ENVIRONMENTAL QUALITY ACT

RECOMMENDED ACTIONS:

1. Find that adoption of amended Rule 74.20 is categorically exempt from the California Environmental Quality Act (CEQA) (Attachment 1).
2. Approve and adopt the proposed legislative findings for the amendments to Rule 74.20 (Attachment 2).
3. Approve and adopt the amendments to Rule 74.20 (Attachment 3).
4. Direct the Clerk of the Board to forward two certified minute orders, and an affidavit of publication of the public hearing notice, for all proposed actions to the Air Pollution Control District within twenty days.
5. Direct Air Pollution Control Officer or his designee to file a CEQA Notice of Exemption pursuant to CEQA Guidelines Section 15062.

STATEMENT OF MATTER FOR BOARD CONSIDERATION:

Background

As a nonattainment area for the state ozone ambient air quality standards, Ventura County is subject to the requirements of the California Clean Air Act (Health & Safety Code § 39000 et seq.). In particular, Health and Safety Code Section 40914, subdivision (a), requires a five percent annual emission reduction in districtwide air pollutant emissions. However, Section 40914(b) provides an exemption from this annual five percent reduction in districtwide emissions if the District uses an alternative emission reduction strategy that (1) is equal to or better than the districtwide emission reduction effort; or (2) includes "all feasible measures" for attaining emission reductions and includes an expeditious adoption schedule.

The proposed amendments to Rule 74.20 constitute such a “feasible measure” that will reduce Reactive Organic Compound (ROC) emissions from the use of adhesives and sealants in the county. Staff has determined the feasibility of this control measure based on:

- Successful implementation of a similar emission control measure for adhesives and sealants by the South Coast Air Quality Management District (SCAQMD) set forth in its Rule 1168.
- Products complying with the proposed ROC content limits are currently available in the county.
- Staff worked closely with the affected facilities and its industry associations to insure feasibility of the proposed standards.

Proposed Rule Requirements

Staff is proposing amendments to Rule 74.20 to reduce ROC emissions from the use of adhesives, sealants, and adhesive primers. This rule applies to any person that uses, supplies, sells, offers for sale, or manufactures these adhesive products in the Ventura County. The emission reductions are based on proposed lower ROC content limits for specific product categories of adhesives, sealants, and adhesive primers.

The proposed amendments to Rule 74.20 are based on a similar rule adopted by SCAQMD in its Rule 1168, which was amended in October 2017. The proposed amendments will reduce ROC emissions in Ventura County and provide better uniformity with the regulation of the same products by neighboring SCAQMD. The last significant changes to the ROC content limits of adhesives and sealants in Rule 74.20 were made by the District on September 9, 2003.

The current proposal adds six new product categories and lowers ROC content limits for eight existing product categories. This proposal does not include SCAQMD’s adopted future ROC content limits in its Rule 1168 where a technology assessment analysis is required prior to the implementation date of the relevant standard. Rather than adopting these technology-forcing limits at this time, District staff will review these future SCAQMD technology assessments to determine qualifying low-ROC product viability prior to proposing the District’s adoption of these standards in our next rule iteration. Detailed discussion of the proposed rule amendments may be found in the staff report (Attachment 4).

Expected Emission Reductions and Cost Analysis

This rule action will achieve significant ROC emission reductions – approximately 15 tons per year – from the use of adhesives and sealants in the county. Over 99 percent of these emission which will be reduced originate from products used for residential or commercial construction or remodeling. According to the most recent SCAQMD survey in 2016, which District staff adjusted for use in Ventura County based on relative population, the ROC emissions from this source are approximately 150 tons per year.

SCAQMD performed a cost analysis for its October 2017 rule revision by comparing the cost of complying adhesives with their non-complying counterparts. The cost differential was used to estimate worst-case reformulation costs, which ranged from \$0.40 to \$3.70 per pound of ROC reduced. Since almost all of the low-ROC adhesive complying products are currently being sold in the county, the actual cost increase to local businesses and consumers is much lower.

Comments

Staff held a public workshop with affected industry on June 7, 2018. Based on comments from industry, the following rule revisions were proposed:

- A new category, Aerosol Insulating Foam Sealant, was proposed with an ROC limit of 250 grams per liter. This proposal does not include the technology-forcing limit of 50 grams per liter adopted by SCAQMD in its Rule 1168.
- Product exemptions are proposed for foam spray application systems that use exempt organic compounds as blowing agents. Since exempt organic compounds have low photochemical reactivity, these products are inherently low emission products.
- Staff proposes to include new hydro-fluoro-olefins (HFO) blowing agents as Exempt Organic Compounds in Section G, Definitions. These chemicals have very low reactivity, zero ozone depletion, and low global warming potential.

Staff also received comments from Environmental Protection Agency Region 9 which have been addressed; no comments were received from the California Air Resources Board. On August 28, 2018, the District's Advisory Committee recommended adoption of proposed amendments to Rule 74.20 by a unanimous vote. (Attachment 5 – Voting Record).

In response to a comment from County Counsel, staff has made a minor clarification to Section B.15 of the rule (denoted with highlighted text). This change was made after the notice for this public hearing was published; however, the change is not substantive.

PROPOSED FINDINGS:

Health and Safety Code Sections 40703, 40727, 40727.2, 40728.5 and 40920.6(a) direct that, prior to adopting amendments to Rule 74.20, your Board adopt findings of necessity, authority, clarity, consistency, non-duplication, reference, cost-effectiveness, incremental cost-effectiveness, and socioeconomic impacts, based upon relevant information presented at the hearing. Health and Safety Code Section 40727.2 requires a written analysis, comparison, and consideration of existing air pollution regulations that apply to the same type of source. Therefore, if your Board approves the proposed revisions to these rules, it is recommended that your Board also adopt the proposed findings that address these statutory requirements.

The proposed amendments to Rule 74.20 have been determined by District staff to be within the scope of the categorical exemptions from CEQA under state CEQA Guideline Sections 15307, Protection of Natural Resources, and 15308, Protection of Environment. The Notice of Exemption with respect to these CEQA exemptions is included as Attachment 1.

This Board letter has been reviewed by County Counsel. If you have any questions, please contact Stan Cowen of my staff at 645-1408.



MICHAEL VILLEGAS
Air Pollution Control Officer

Attachments:

1. Proposed Notice of CEQA Exemption
2. Proposed Legislative Findings
3. Proposed Amended Rule 74.20 (Strikeout/Underline format)
4. Final Staff Report
5. Advisory Committee Voting Record

PROPOSED FINDINGS
PURSUANT TO HEALTH AND SAFETY CODE SECTIONS
40001(c), 40703, 40727, 40727.2, 40728.5, 40920.6(a) FOR ADOPTING AMENDMENTS TO
RULE 74.20, ADHESIVES AND SEALANTS

1. **NECESSITY:** Amending Rule 74.20 is necessary to obtain ozone precursor emission reductions from this stationary source category in order to move closer to the goal of attaining state and federal ambient air quality standards for ozone.
2. **AUTHORITY:** The Ventura County Air Pollution Control District is authorized and required by the California Health and Safety Code Division 26, Part 3, Sections 40000 and 40001, to adopt and enforce rules and regulations to attain and maintain state and federal ambient air quality standards.
3. **CLARITY:** Amendments to Rule 74.20 are written so that it can be easily understood and implemented by the persons directly affected by it.
4. **CONSISTENCY:** Amendments to Rule 74.20 are in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations.
5. **NONDUPLICATION:** Amendments to Rule 74.20 do not impose the same requirements as an existing state or federal regulation.
6. **REFERENCE:** California Health and Safety Code Division 26, Part 3, Sections 40000 and 40001 are the sections of state law that will be implemented by the adoption of these amendments.
7. **COST-EFFECTIVENESS, INCRMENTAL COST-EFFECTIVENESS, AND SOCIOECONOMIC IMPACTS:** Information related to the cost-effectiveness and socioeconomic impacts of Rule 74.20 amendments are set forth in Attachment 4 and has been considered in adopting these amendments.
8. **ANALYSIS OF AIR POLLUTION CONTROL REQUIREMENTS:** Information on existing regulations related to Rule 74.20 is set forth in the Staff Report, dated October 9, 2018, and has been considered in adopting these rule amendments.
9. **ATTAINMENT OF AMBIENT AIR QUALITY STANDARDS:** Ventura County has been designated a nonattainment area for both the state and federal ambient air quality standards for ozone. Reactive Organic Compound (ROC) emissions are precursors to the formation of ozone. Adoption of Rule 74.20 amendments will reduce ROC emissions from this source category, which will help Ventura County move closer to attainment of the state and federal ambient air quality standards for ozone.

VENTURA COUNTY AIR POLLUTION CONTROL DISTRICT

RULE 74.20 - ADHESIVES AND SEALANTS

(Adopted 6/8/93, Revised 9/10/96, 1/14/97, 9/9/03, 1/11/05, 9/11/12, [xx/xx/18](#))

A. Applicability

The provisions of this rule apply to any person who supplies, sells, offers for sale, manufactures, solicits the application of, or uses adhesives, sealants, sealant primers or adhesive primers in Ventura County.

B. Requirements

1. Unless otherwise specified in Subsection B.2 or B.3, a person shall not apply any adhesives or any adhesive primers, which have an ROC content less water and exempt organic compounds in excess of 250 g/l (for low-solids adhesives or adhesive primers, the ROC content is based on a "grams per liter of material" basis).
2. Adhesives/Sealants/Adhesive Primers/Sealant Primers (Specific Applications): No person shall apply any adhesive, sealant or primer, which is defined under the following product categories, and has an ROC content, less water and exempt organic compounds in excess of the following limits, as applied (for low-solids adhesives, sealants or primers, the ROC content is based on a "grams per liter of material" basis).

Limits			
"Grams of ROC per Liter of Adhesive, Sealant or Primer Less Water and Exempt Organic Compounds"			
Category	Current Limit	Effective 7/1/2019	Effective 1/1/2023
Architectural Adhesive Products:			
Multipurpose Architectural Construction Adhesive	70		
Ceramic, Porcelain & Stone Wall Tile Adhesive	65		
Cove Base Adhesive	50		
Drywall Adhesive	50		
Flooring Adhesives:			
Ceramic, Porcelain, & Stone Floor Tile	65		
Outdoor Carpet	150	50	
Indoor Carpet or Carpet Pad	50		
Rubber Flooring	60		
Subfloor Adhesive	50		
VCT and Asphalt Tile	50		
Wood Flooring	100		20
Other Flooring	150	50	
Panel Adhesive	50		

Limits
 "Grams of ROC per Liter of Adhesive, Sealant or Primer
 Less Water and Exempt Organic Compounds"

Category	Current Limit	Effective 7/1/2019	Effective 1/1/2023
Architectural Adhesive Products (cont.):			
Roofing Adhesives:			
Single Ply Roof Membrane	250		
Nonmembrane Roof	300		
Structural Glazing Adhesive	100		
Structural Wood Member Adhesive	140		
Miscellaneous Adhesives:			
Contact Adhesive	80		
Special Purpose Contact Adhesive	250		
Sheet-Applied Rubber Lining Operations	850		
Tire Retread	100		
Traffic Marking Tape Adhesive	150		
Top and Trim Adhesive	540		
Waterproof Resorcinol Glue	170		
Plastic Welding Products:			
ABS Welding	400	325	
ABS to PVC Transition Cement	510		
Cellulosic Plastic Welding (except ethyl cellulose)	100		
CPVC Welding	490		
PVC Welding	510		
Styrene-Acrylonitrile Welding	100		
Plastic Welding Primer	650	550	
Other plastic welding	500		
Adhesive Primers:			
Automotive Vehicle Glass Adhesive Primer	700		
Pressure Sensitive Adhesive Primer	785		
Other Adhesive Primer	250		
Sealants:			
Architectural	250		
Aerosol Insulating Foam Sealant	250		
Marine Deck	760		
Nonmembrane Roof	300		
Non-Staining Plumbing Putty	420	150	50
Potable Water Sealant	420	100	
Roadway Sealant	250		
Single-Ply Roof Membrane Sealant	450		
All Other Roof Sealants	420	300	
All Other Architectural Sealants (Non-Roof)	250	50	
All Other Sealants (Non-Architectural)	420		250

Limits
"Grams of ROC per Liter of Adhesive, Sealant or Primer
Less Water and Exempt Organic Compounds"

<u>Category</u>	<u>Current Limit</u>
Sealant Primers:	
Architectural Nonporous	250
Architectural Porous	775
Marine Deck	760
Other Sealant Primers	750

3. Adhesives (Substrates or Nonspecific Operations): No person shall apply any adhesive to a substrate with an ROC content, "less water and exempt organic compounds" in excess of the following limits, as applied (for low-solid adhesives, sealants or primers, the ROC content is based on a "grams per liter of material basis").

If an adhesive is used to bond dissimilar substrates, the applicable substrate category with the highest ROC limit shall be the limit for that operation. If an operator uses an adhesive product listed in Subsection B.2, then the requirement in that section applies rather than this one.

Limits
"Grams of ROC per Liter of Adhesive
Less Water and Exempt Organic Compounds"

<u>Substrate/Application</u>	<u>Current Limit</u>
Fiberglass	80
Flexible Vinyl	250
Metal to Metal	30
Plastic Foam	50
Porous Material (Except Wood and Plastic Foam)	50
Wood	30

4. Substrate Surface Preparation:

~~Until December 1, 2012, no person shall use a material for substrate surface preparation that exceeds the following applicable limit:~~

<u>Category</u>	<u>Type of Limit</u>	<u>Limit</u>
Single Ply Roof	ROC Composite	45 mm of Hg
Membrane Installation	Partial Pressure	at 20°C
Inkjet Printer Head Assembly	ROC Content	200 g/l of material
All Others	ROC Content	70 g/l of material

~~Effective December 1, 2012, n~~No person shall use a material for substrate surface preparation that exceeds the following applicable limit:

<u>Category</u>	<u>Type of Limit</u>	<u>Limit</u>
Inkjet Printer Head Assembly	ROC Content	200 g/l of material
All Others	ROC Content	25 g/l of material

5. Solvent Cleaning:

~~Until December 1, 2012, no person shall use ROC-containing materials for the removal of adhesives or coatings from surfaces, other than spray application equipment, unless the ROC composite partial pressure of the materials used is less than 45 mm of Hg at 20 °C.~~

~~Effective December 1, 2012,~~ No person shall use ROC-containing materials for solvent cleaning unless the ROC content is 25 grams per liter of material or lower.

6. Storage of ROC-Containing Materials: All ROC-containing materials, including but not limited to, adhesives, sealants, coatings, cleanup solvents or surface preparation materials, shall be stored in closed containers, which are nonabsorbent and do not leak. These storage containers shall be closed except when filling or emptying.

7. Adhesive Spray Application Equipment Cleaning:

~~Until December 1, 2012, No person shall use ROC-containing materials for the cleaning of spray application equipment used in adhesive operations unless one of the following is used:~~

~~a. An enclosed gun washer or "low emission spray gun cleaner" that has been approved in writing by the APCO is properly used and is closed when not in use. The ROC composite partial pressure of organic solvents used shall be less than 45 mm Hg at 20 °C; or~~

~~b. A solvent containing no more than 70 grams of ROC per liter of material shall be used for cleaning, flushing or soaking of filters, flushing lines, pipes, pumps, and other parts of the application equipment. Parts containing dried adhesive may be soaked in an organic solvent as long as the ROC composite partial pressure of the solvent is 9.5 mm Hg or less at 20 °C.~~

~~Effective December 1, 2012,~~ No person shall use ROC-containing materials for the cleaning of spray application equipment used in adhesive operations unless a solvent containing no more than 25 grams of ROC per liter of material shall be used for cleaning, flushing or soaking of filters, flushing lines, pipes, pumps, and other parts of the application equipment.

8. Add-on Control Equipment Option: In lieu of complying with the provisions of Subsections B.1, B.2 or B.3, emissions of ROC may be controlled by an emission capture and control system, which reduces ROC emissions to the atmosphere, provided that:

- a. The combined control and capture efficiency reduces emissions by at least 85 percent, by weight, during any period of continuous operation not to exceed 24 hours, and

- b. Written approval for such equipment, in the form of an Authority to Construct and a Permit to Operate is received from the Air Pollution Control Officer (APCO).
- 9. Adhesive Strippers: No person shall use an adhesive stripper unless its ROC composite partial pressure is 9.5 mm Hg or less at 20 °C.
- 10. Primers, Sealants or Adhesives Containing 1,1,1-Trichloroethane or Methylene Chloride: No person shall apply any primer, sealant or adhesive to any surface, if that product contains any 1,1,1-trichloroethane or methylene chloride. Adhesives containing methylene chloride used to plastic weld the following plastic substrates are exempt from this requirement:
 - a. Polycarbonate
 - b. Polysulfone
 - c. Acrylics including Polymethylmethacrylate (PMMA)
 - d. Phenylene-Oxide based resins
 - e. Polyetherimide
- 11. Prohibition of Specification: No person shall solicit, require for use, or specify the application of any adhesive, primer or sealant, if such use or application results in a violation of the provisions of this Rule. This prohibition shall apply to all written or oral contracts.
- 12. Compliance Statement Requirement: The manufacturer of any adhesive, sealant, sealant primer or adhesive primer subject to this rule shall include a designation of the maximum ROC or VOC content as supplied, including adhesive components, expressed in grams per liter or pounds per gallon excluding water and exempt organic compounds from the appropriate test method [in Section E or based on product formulation data](#), on containers and data sheets. This designation shall include recommendations regarding thinning, reducing, or mixing with any other ROC or VOC-containing materials. This statement shall include the maximum ROC or VOC on an as-applied basis when used in accordance with the manufacturer's recommendations.
- 13. Liquid Cleaning Material Compliance Statement: The manufacturer of liquid cleaning materials subject to this rule shall designate on product containers and data sheets the ROC content ~~and ROC Composite Partial Pressure~~ of cleaning materials as supplied. This designation shall include recommendations regarding mixing with any other ROC containing materials, and express the cleaning material ROC content when used in accordance with the manufacturer's recommendations. All letters and numbers used to designate ROC or VOC content on product labels shall be visible and legible.
- 14. Prohibition of Sales:
 - a. Except as provided in Subsections B.14.c, B.14.d, or B.14.e, no person shall supply, sell, or offer for sale any adhesive, sealant or primer which, at the time of sale, is defined under a product category in Subsection B.2, and exceeds the ROC limits listed in Subsection B.2 after the specified effective dates. This provision only applies to products that are supplied to or sold to persons within the District.

- b. Except as provided in Subsections B.14.c, B.14.d, or B.14.e, no person shall supply, sell, or offer for sale any adhesive, sealant, or primer which, at the time of sale, contains any 1,1,1-trichloroethane or methylene chloride, except for those adhesives designed to plastic weld polycarbonates, polysulfones, acrylics, phenylene oxide based resins or polyetherimides.
- c. The sales prohibition in Subsections B.14.a and B.14.b shall not apply to any supplier or seller of any adhesive, sealant or primer as follows:
 - 1) Any adhesive shipped outside of the District for use outside of the District.
 - 2) The sale of adhesives to a user who has installed an APCD permitted ROC add-on control device.
- d. The sales prohibitions in Subsections B.14.a and B.14.b shall not apply to the sale of any adhesive, sealant, or primer, except plastic welding products and except aerosol insulating foam sealants, if:
 - 1) The adhesive, sealant, or primer is sold in any container(s) having a capacity of 16 ounces or less (net volume) or 1 pound or less (net weight); and
 - 2) The total weight or volume of two or more containers packaged together must be less than 1 pound or 16 ounces, respectively, to qualify for this exemption.
- e. The sales prohibitions in Subsections B.14.a and B.14.b shall not apply to any manufacturer of any adhesive, sealant, or primer if the manufacturer has provided an accurate compliance statement and if:
 - 1) The product was not sold directly to a user or a sales outlet located in the District, or
 - 2) The product was sold to an independent distributor that is not a subsidiary of, or under the direct control of the manufacturer.

15. Sell-Through and Use-Through Provision: Any adhesive or sealant that is manufactured prior to the effective date of the applicable ROC content limit in Subsection B.2 and that has an ROC content limit above that limit (but not above the limit in effect at the date of manufacture) may be sold, supplied, or offered for sale for up to three years after the specified effective date and may be used up to four years after the specified effective date as long as the date of manufacture is clearly visible on the container (or code for manufacture date has been provided to the District) ~~is clearly visible on the container~~. This provision shall not apply to those adhesives or sealants subject to current ROC limits in Subsection B.2.

C. Exemptions

1. This rule, except Section B.14, shall not apply to any stationary source that emits less than 200 pounds of ROC in every rolling period of 12 consecutive calendar months from adhesive and sealant operations. Emissions from cold cleaners, vapor degreasers, and aerosol products shall not be included in this determination. Any person claiming this exemption shall provide monthly records sufficient to substantiate this claim.
2. Exemption of Operations Subject to Other District Rules: The provisions of this rule shall not apply to the following operations that are subject to other District rules.
 - a. Assembling, manufacturing and repairing of aerospace components subject to Rule 74.13, excluding manufacturing of aircraft tires.
 - b. Any graphic arts operation subject to the requirements of Rule 74.19, Graphic Arts.
 - c. Any screen printing operation subject to the requirements of Rule 74.19.1, Screen Printing Operations.
3. Exemption of Specific Operations from ROC Standards for Adhesives/Sealants/Primers: The ROC limits of Subsections B.1, B.2, and B.3 of this rule shall not apply to the following operations.
 - a. Assembling and manufacturing of undersea-based weapon systems.
 - b. Testing and evaluation of adhesive or sealant products in any research and development or analytical laboratories.
 - c. Plastic welding operations used in the manufacturing of medical devices.
 - d. Tire repair operations, provided the label on the adhesive used states "For Tire Repair Only".
 - ~~e. Plaque laminating operations where adhesives are used to bond a clear, polyester acetate laminate to wood with lamination equipment installed prior to July 1, 1992.~~
 - e. Field installation or repair of potable water linings and covers at potable water treatment, potable water storage, or potable water distribution facilities. Potable water treatment is any process that will improve the quality of water to make it exceed or meet applicable drinking water standards.
 - f. Manufacturing operations of the following products: diving suits, rubber fuel bladders, inflatable boats, life preservers or other stand-alone elastomeric type products designed for immersion in liquids. The adhesive products used by these operations must be labeled "For the bonding of immersible products only."

- g. Inkjet printer head assembly operations where the ROC content of the adhesive used for laminating is less than 100 grams per liter of material.
 - h. Thin film laminating operations of magnetic or electronic components excluding inkjet printer head assembly operations.
 - i. Glass bonding and priming processes in automotive convertible top manufacturing operations.
4. Exemption of Specific Adhesives and Sealants:
- a. Any adhesive, primer, or sealant that contains less than 20 grams of ROC per liter of material is exempt from all the provisions of this rule.
 - b. Any aerosol adhesive (except aerosol insulating foam sealant) is exempt from all provisions of this rule.
 - c. Any cyanoacrylate or methyacrylate-based adhesive is exempt from all provisions of this rule.
 - d. Any adhesive tape is exempt from all provisions of this rule.
 - e. Any low pressure (less than 250 psi) or high pressure (1,000 to 1,300 psi) two-component spray polyurethane foam system that uses exempt organic compounds as the blowing agent and that uses ancillary spray equipment and hoses to apply the foam.
 - f. Any one-component spray polyurethane foam system in a cylinder (containing not less than 10 pounds and not more than 23 pounds of prepolymerized mixtures) that uses exempt organic compounds as the blowing agent and that uses ancillary spray equipment or hoses to apply the foam.
5. The provisions of Subsection B.3 of this rule shall not apply to any person who uses less than 10 gallons per rolling period (consisting of 12 consecutive calendar months) per stationary source of an adhesive, a sealant, or primer in a separate formulation provided the total volume of noncomplying adhesives, sealants, or primers at a stationary source does not exceed 55 gallons per rolling period (consisting of 12 consecutive calendar months). If a specific adhesive, sealant, sealant primer or adhesive primer can be defined under one of the product categories in Subsection B.2, then this exemption does not apply. Any person seeking to claim this exemption shall notify the APCO in writing that a complying adhesive, sealant or primer is not available and maintain records sufficient to substantiate this claim.

D. Recordkeeping

- 1. Any person subject to this rule shall:

- a. Maintain a current list of all adhesives, sealants, primers, strippers and solvents that provides all information necessary to evaluate compliance including the following, as applicable:
 - 1) The name and manufacturer of each ROC-containing material including any catalysts, reducers, or other components used.
 - 2) Mix ratio, if applicable.
 - 3) ROC content (less water and exempt organic compounds except low-solids coatings, which are expressed as grams per liter of material basis), as applied,
 - 4) ROC composite partial pressure of the adhesive, ~~sealant, primer, solvent, or~~ stripper.
 - 45) Applicable ROC content limit or ROC composite partial pressure limit from Section B.
 - b. Maintain records of the monthly volume of each complying adhesive, sealant, primer, solvent, or stripper used that is required to be tracked by a District permit condition.
 - c. Maintain records of the daily volume of each noncompliant adhesive, sealant, primer, solvent or stripper used. Adhesives, sealants or primers qualifying for the exemption in Subsection C.5 shall not be subject to this daily recordkeeping requirement.
 - d. Any person using an emission control system as a means of complying with this rule shall maintain daily records of key system operating and maintenance procedures which will demonstrate continuous operation and compliance of the emission control device during periods of emission producing activities.
2. All records shall be retained for at least two (2) years from the date of each entry and shall be available to District personnel upon request.

E. Test Methods

1. The ROC and solids content of all adhesives products, sealants, primers and cleaning solvents, except as specified in Section E.3, shall be determined using EPA Reference Method 24 (40 CFR Part 60, Appendix A), [South Coast AQMD: Laboratory Method 304 \(Determination of Volatile Organic Compounds in Various Materials\)](#), or [SCAQMD Method 313 \(Determination of Volatile Organic Compounds by Gas Chromatography-Mass Spectrometry\)](#).
2. Exempt organic compounds shall be determined using ASTM D4457-91 [or SCAQMD Laboratory Method 303](#). For exempt compounds where no reference test method is

available, a facility requesting the exemption shall provide appropriate test methods approved by the APCO and approvable by the U.S. EPA.

3. The ROC content of any plastic welding product shall be determined using Proposed SCAQMD Laboratory Method of Analysis for Enforcement Samples, Method 316a-92, "Determination of VOC in Material Used for Pipes and Fittings" (October 1996).
4. The capture efficiency shall be determined according to EPA's technical document, "Guidelines for Determining Capture Efficiency," January 9, 1995, and Methods in 40 CFR 51 Appendix M, Methods 204-204F, as applicable:
Methods 204, Criteria for and Verification of a Permanent or Temporary Total Enclosure
Method 204A, VOC content in Liquid Input Stream
Method 204B, VOC Emissions in Captured Stream
Method 204C, VOC Emissions in Captured Stream (Dilution Technique)
Method 204D, VOC Emissions in Uncaptured Stream from Temporary Total Enclosure
Method 204E, VOC Emissions in Uncaptured Stream from Building Enclosure, and
Method 204F, VOC Content in Liquid Input Streams (Distillation Approach)

Control system efficiency shall be determined by 40 CFR 60, Appendix A, Method 18, "Measurement of Gaseous Organic Compound Emissions by Gas Chromatography", Method 25, "Determination of Total Gaseous Nonmethane Organic Emissions as Carbon" or Method 25A, "Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer."

5. ROC composite partial pressure shall be calculated using a widely accepted published source such as: Boublik, T., V. Fried and E. Hala, "The Vapor Pressure of Pure Substances," Elsevier Scientific Publishing Co. New York (1973); Perry's Chemical Engineer's Handbook, McGraw-Hill Book Company; CRC Handbook of Chemistry and Physics, Chemical Rubber Publishing Company (1986-87), and Lange's Handbook of Chemistry, John A. Dean, editor, McGraw-Hill Book Company (1985). The true vapor pressure of a component in a mix may be determined by ASTM Method D2879-96. The ROC composite pressure of a solvent mix consisting entirely of ROC may be determined by ASTM Method D2879-97, "Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope."

6. If applicable, the ROC content of reactive adhesives may be determined using EPA Method Appendix A to Subpart PPPP of Part 63 – Determination of Weight Volatile Matter Content and Weight Solids Content of Reactive Adhesives. This method is a sandwich method where the adhesive cures between two substrates to prevent moisture in the atmosphere from competing with the reaction taking place in the adhesive. This method may not be used for one-part moisture-cured urethanes, silicone adhesives, or reactive sealants.

- ~~6. Until December 1, 2012, the active and passive solvent losses from spray gun cleaning systems shall be determined using SCAQMD's "General Test Method for Determining Solvent Losses from Spray Gun Cleaning Systems" dated October 3, 1989. The test solvent~~

~~for this determination shall be any lacquer thinner with a minimum ROC composite partial pressure of 105 mm of Hg at 20 °C, and the minimum test temperature shall be 15 °C.~~

F. Violations

Failure to comply with any provision of this rule, including the requirement to maintain records or supply VOC or ROC information, or supply ROC composite partial pressure information, shall constitute a violation of this rule. Noncompliance determined by any test method specified or referenced in this Rule is a violation of this Rule. Where more than one approved test method may be applicable, sources shall not be required to demonstrate compliance using more than one approved test method.

G. Definitions

1. "ABS Welding Adhesive": Any adhesive that is intended by the manufacturer to weld acrylonitrile styrene (ABS) plastic. ABS is made by reacting monomers of acrylonitrile, butadiene, and styrene and is normally identified with ABS marking.
2. "ABS to Polyvinyl Chloride (PVC) Transition Cement": Any plastic welding adhesive that is intended by the manufacturer to join ABS to PVC building drains or building sewers.
- ~~2.3.~~ "Acrylic": Acrylic is any thermoplastic polymer or copolymer of acrylic acid, methacrylic acid, ester of these acids, or acrylonitrile. Acrylic contains at least one version of a methacrylate monomer, including but not limited to: methylmethacrylate or butylmethacrylate.
- ~~3.4.~~ "Adhesive": Any substance that is used to bond one surface to another surface by attachment.
- ~~4.5.~~ "Adhesive Primer": ~~Any coating that does not contain any adhesive and is intended by the manufacturer to be applied to a substrate, prior to the application of an adhesive, to provide a bonding surface.~~ Any film-forming material applied to a substrate, prior to the application of an adhesive or adhesive tape, to increase adhesion or film bond strength, promote wetting, or form a chemical bond with a subsequently applied adhesive.
6. "Adhesive Tape": Any backing material coated with an adhesive, and includes, but is not limited to, drywall tape, heat sensitive tape, pressure sensitive adhesive tape, and water-activated tape.
7. "Aerosol Insulating Foam Sealant": Any 8 ounce to 30 ounce aerosolized can of polyurethane prepolymer foam used to fill and form a durable, airtight, water-resistant seal to common building substrates, such as wood, brick, concrete, foam board, and plastic. This sealant is intended by the manufacturer to be used for hand-held applications.
- ~~5.8.~~ "Adhesive Stripper": A volatile liquid applied to remove a cured or dried adhesive.

- ~~6.9.~~ "Aerosol Adhesive": Any adhesive packaged as an aerosol product in which the spray mechanism is permanently housed in a nonrefillable can designed for hand-held application without the need for ancillary hoses or spray equipment. Aerosol adhesives include special purpose adhesives, mist spray adhesives, and web spray adhesives, as defined by the California Air Resources Board consumer product regulation found in Title 17 of the California Code of Regulations, beginning at Section 94507.
10. "Architectural Appurtenance": Any accessory to a stationary structure, including, but not limited to, hand railings, cabinets, bathroom and kitchen fixtures, fences, rain gutters and downspouts, window screens, lamp posts, heating and air conditioning equipment, other mechanical equipment, large fixed stationary tools, signs, motion picture and production sets, and concrete forms, excluding aquariums.
- ~~7.11.~~ "Architectural Sealant Primer- Nonporous": Any sealant primer intended by the manufacturer to be applied to nonporous material surfaces on stationary structures, including mobile homes, and their appurtenances. ~~Appurtenances include, but are not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain gutters and downspouts, and windows.~~
- ~~8.12.~~ "Architectural Sealant Primer- Porous": Any sealant primer intended by the manufacturer to be applied to porous material surfaces on stationary structures, including mobile homes, and their appurtenances. ~~Appurtenances include, but are not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain gutters and downspouts, and windows.~~
- ~~9.13.~~ "Architectural Sealant": Any sealant intended by the manufacturer to be applied on stationary structures, including mobile homes, and their appurtenances. ~~Appurtenances include, but are not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain gutters and downspouts, and windows.~~
- ~~10.14.~~ ~~"Automotive Glass Adhesive Primer": Any adhesive primer that is intended by the manufacturer to be applied to automotive glass prior to installation with an adhesive/sealant. This primer improves adhesion to the pinch weld and blocks ultraviolet light.~~
- ~~11.15.~~ "Capture Efficiency": The percentage of ROC used, emitted, evolved, or generated by the operation, that is collected, and directed to an air pollution control device.
- ~~12.16.~~ "Carbon Adsorption": A carbon unit that is typically either a fixed-bed or a fluidized-bed design. ROC-laden air is pretreated, if necessary, to remove any solids, liquids, and long-chain, high-boiling organic compounds that might coat the carbon. The exhaust stream then passes through the adsorbing bed where the ROCs collect on the surface of the carbon.
- ~~13.17.~~ "Catalytic Incinerator": An incinerator that requires a catalyst to promote the oxidation of the ROCs at a lower temperature. The catalyst is often, but not always, a platinum serial metal deposited in a porous form onto a structure, such as a honeycomb, or pellets. The ROCs are preheated up to 650 to 900 °F and then enter the catalyst area. There the

oxidation of the ROCs continues to produce an increase in temperature across the catalyst bed.

- ~~14.~~18. "Cellulosic Plastics": Any plastic containing the naturally occurring polymer or polysaccharide, cellulose (C₆H₁₀O₅)_n. Examples include cellulose acetate, cellulose acetate butyrate, cellulose nitrate and cellulose propionate.
- ~~15.~~19. "Ceramic, Porcelain, and Stone Tile Installation Adhesive": Any adhesive that is intended by the manufacturer to be used for installation of ~~ceramic~~ tiles products.
- ~~16.~~20. "Contact Adhesive": Any adhesive that is intended by the manufacturer to adhere to itself instantaneously upon contact and is indicated by the label or data sheet as a contact adhesive. This adhesive is applied to both adherents and allowed to become dry, which develops a bond when the adherents are brought together without sustained pressure. For the purpose of this rule, products that qualify as a contact adhesive using the above definition, and that are labeled exclusively for only one of the following applications shall not be required to meet the ROC limit for "Contact Adhesives" in Subsection B.2:
- a. Single-ply roofing
 - b. Bonding of immersible products
 - c. Bonding of flexible vinyl to flexible vinyl
 - d. Nonmembrane roofing
- ~~17.~~21. "Cove Base Installation Adhesive": Any adhesive that is intended by the manufacturer to be used for cove base (or wall base) installation. The cove base is generally made of vinyl or rubber, and is installed on a wall or vertical surface at floor level.
- ~~18.~~22. "CPVC Welding": Any adhesive intended by the manufacturer for the welding of CPVC (chlorinated polyvinyl chloride) plastic. CPVC is a polymer of the monomer that contains 67 percent chlorine and is normally identified with a CPVC marking.
- ~~19.~~23. "Cyanoacrylate Adhesive": Any adhesive that is a single-component reactive diluent adhesive that contains at least 85 percent by weight, methyl, ethyl, methoxymethyl or other functional groupings of cyanoacrylate.
- ~~20.~~24. "Dry Wall Adhesive": An adhesive that is intended by the manufacturer to be used to install gypsum dry wall to studs or solid surfaces.
25. "Energy Curable Adhesives and Sealants": Single-component reactive products that cure upon exposure to visible-light, ultra-violet light, or to an electron beam. The VOC content of thin film Energy Curable Adhesives and Sealants may be determined by manufacturers using ASTM Method 7767-11, Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them.

~~21.~~26. "Exempt Organic Compounds": As defined in Rule 2, Definitions, of these Rules, except for the purpose of this rule, exempt organic compounds shall also include the following foam blowing agents:

a. trans-1,3,3,3-tetrafluoropropene (HFO-1234ze)

b. trans-1-chloro-3,3,3-trifluoropropene (HFO-1233zd)

c. cis-1,1,1,4,4,4-hexafluoro-2-butene (HFO-1336mzz-Z) Note: The inclusion of this compound as an exempt ROC shall not become effective until EPA adopts a final rule confirming its exempt VOC status.

~~22.~~27. "Fiberglass": Fiberglass is any fiber reinforced plastic (FRP) surface that has fiber material set in a binding substance of plastic resins.

~~23.~~28. "Flexible vinyl": Nonrigid polyvinyl chloride plastic with at least five percent, by weight, of plasticizer content. A plasticizer is a material, such as a high-boiling point organic solvent, that is incorporated into an adhesive to increase its flexibility, workability, or distensibility, and may be determined using ASTM Method E260-91 or from product formulation data.

~~24.~~29. "Grams of ROC per liter of Adhesive, Sealant, or Primer, less water and exempt organic compounds": The weight of ROC per combined volume of ROC and coating solids calculated using the following equation:

$$\begin{array}{l} \text{Grams of ROC per Liter of Adhesive} \\ \text{Less Water and Exempt Organic Compound} = \end{array} \quad \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where: W_s = Weight of volatile compounds (grams)

W_w = Weight of water (grams)

W_{es} = Weight of exempt organic compounds (grams)

V_m = Volume of material (liters)

V_w = Volume of water (liters)

V_{es} = Volume of exempt organic compounds (liters)

~~25.~~30. "Grams of ROC per Liter of Material": The weight of ROC per volume of material shall be calculated using the following equation:

$$\begin{array}{l} \text{Grams of ROC per Liter of Material} \\ \\ \end{array} \quad = \quad \frac{W_s - W_w - W_{es}}{V_m}$$

Where: W_s = Weight of volatile compounds (grams)

W_w = Weight of water (grams)

W_{es} = Weight of exempt organic compounds (grams)

V_m = Volume of material (liters)

~~26.~~31. "Gun Washer": Electrically or pneumatically operated system that is designed to clean spray application equipment and minimize emissions. A gun washer may also be considered a gun

cleaning system that consists of spraying solvent into an enclosed container using a snug fitting.

- ~~27.~~32. "Inkjet Printer Head Assembly Operation": Any operation used to manufacture or assemble the printer head used on inkjet printers. Inkjet printing is a printing method where the liquid ink is transferred at high velocity through a small diameter opening(s) to a solid substrate.
- ~~28.~~33. "Low Emission Spray Gun Cleaner": Any properly used spray gun equipment cleanup device which has passive solvent losses of no more than 0.6 grams per hour and has active solvent losses of no more than 15 grams per operating cycle as defined by the test method in Subsection E.6.
- ~~29.~~34. "Low-Solids Adhesive, Sealant or Primer": Any product that has less than one pound of solids per gallon of material (120 grams or less of solids per liter of material). Such solids are the non-volatiles remaining after a sample is heated at 110°C for one hour.
- ~~30.~~35. "Marine Deck Sealant": Any sealant intended by the manufacturer to be applied to wooden marine decks.
- ~~31.~~36. "Marine Deck Sealant Primer": Any sealant primer intended by the manufacturer to be applied to wooden marine decks.
- ~~32.~~37. "Multipurpose ~~Architectural~~Construction Adhesives": Any adhesive that is intended by the manufacturer to be used for the installation or repair of various construction materials or to bond architectural appurtenances, including but not limited to drywall, subfloor, panel, tileboard, deck and lumber, seams, fiberglass reinforced plastic (FRP), ceiling tile and acoustical tile. Adhesives used to bond uninstalled cabinets, counters, and other architectural appurtenances are subject to this adhesive category.
- ~~33.~~38. "Nonmembrane Roof Sealant/Adhesive": Any sealant or adhesive that is intended by the manufacturer to install or repair nonmembrane roofs and that is not intended for the installation of prefabricated single-ply flexible roofing membranes. This category includes plastic or asphalt roof cement, asphalt roof coatings, and cold application cement.
- ~~34.~~39. "Outdoor Carpet Adhesive": Any adhesive intended by the manufacturer for the installation of carpet or artificial turf that is not in an enclosure and is exposed to ambient weather conditions.
40. "Non-Staining Plumbing Putty": Any non-staining sealant intended by the manufacturer to be provide watertight seals around faucets and drains, and is formulated to be used on granite, marble, quartz, sandstone, or any other natural surfaces.
- ~~35.~~41. "Panel Adhesive": An adhesive that is intended by the manufacturer to be used for the installation of plywood, pre-decorated hardboard (or tileboard), fiberglass reinforced plastic, and similar pre-decorated or non-decorated panels to studs or solid surfaces.

~~36.42.~~ "Percent ROC by Weight": The ratio of the weight of ROC to the weight of the material, expressed as a percentage by weight. The percent ROC by weight is calculated as follows:

$$\% \text{ ROC weight} = \frac{W_v}{W} \times 100$$

Where W_v = Weight of the ROCs (grams)
 W = Weight of the Material (grams)

~~37.43.~~ "Plastic Welding Primer": Any primer intended by the manufacturer to prepare plastic substrates prior to welding.

~~38.44.~~ "Plastic Foam": Any rigid or spongy cellular plastic mass with gas bubbles dispersed throughout. Examples include but are not limited to: urethane foams, PVC foams, Styrofoam, Foamboard and polyethylene foams.

~~39.45.~~ "Plastic Welding": The use of solvent-based adhesives to dissolve plastic surfaces to form a weld-like bond between mating surfaces.

~~40.46.~~ "Plastic Welding Products": Any product intended by the manufacturer to weld plastic substrates, or to prepare plastic substrates prior to welding. These products include ABS welding products, cellulosic plastic welding products, CPVC welding products, PVC welding products, styrene-acrylonitrile welding products, plastic welding primers, and other plastic welding products.

~~41.47.~~ "Plastics": Synthetic materials chemically formed by the polymerization of organic (carbon-based) materials.

~~42.48.~~ "Polycarbonate": Polycarbonate is a type of thermoplastic "structural" foam and contains a plastic resin that can be found in Lexan manufactured by General Electric Company or in Tuffrak manufactured by Rohm and Haas Company.

~~43.49.~~ "Porous Material": A material whose surface is permeable to liquids; such materials include but are not limited to paper, and corrugated paperboard.

50. "Potable Water Sealant": Any sealant intended by the manufacturer to be used in water treatment or water distribution applications, which requires compliance with NSF/ANSI Standard 61: Drinking Water System Components – Health Effects.

51. "Pressure Sensitive Adhesive": Any adhesive intended by the manufacturer to form a bond when pressure is applied (without the need for solvent, water, or heat) and is typically applied to backings or release liners.

52. "Pressure Sensitive Adhesive Primer": Any adhesive primer intended by the manufacturer to be applied during the application of a pressure sensitive adhesive product. This primer will result in the increased adhesion or shorter cure times of the applied adhesive.

~~44.~~53. "PVC Welding Adhesive": Any adhesive intended by manufacturer to weld polyvinyl chloride (PVC) plastic. PVC plastic is a polymer of the chlorinated vinyl monomer that contains 57 percent chlorine and which is normally identified with a PVC marking.

~~45.~~54. "Reactive Organic Compounds (ROC)": As defined in Rule 2, Definitions, of these Rules. The term "volatile organic compound" (VOC) is equivalent to ROC.

55. "Reactive Adhesives": Any adhesive that is composed of monomers that become integral parts of the cured product through chemical reactions. Reactive products include, but are not limited to, polyurethane and two-component regulated products.

~~46.~~56. "Roadway Sealant": Any sealant intended by the manufacturer to be applied to public streets, highways, and other surfaces, including but not limited to curbs, berms, driveways and parking lots.

~~47.~~57. "ROC Composite Partial Pressure": The sum of the partial pressures of the compounds defined as ROCs. ROC composite partial pressure is calculated as follows:

$$PP_C = \frac{\sum_{i=1}^n \left(\frac{W_i}{MW_i} \right) (VP_i)}{\left(\frac{W_w}{MW_w} \right) + \sum_{e=1}^n \left(\frac{W_e}{MW_e} \right) + \sum_{i=1}^n \left(\frac{W_i}{MW_i} \right)}$$

Where:

W_i = Weight of the "i"th ROC compound, in grams

W_w = Weight of water, in grams

W_e = Weight of the "e"th exempt organic compound, in grams

MW_i = Molecular weight of the "i"th ROC compound, in g/(g-mole)

MW_w = Molecular weight of water, in g/(g-mole)

MW_e = Molecular weight of the "e"th exempt organic compound, in g/(g-mole)

PP_C = ROC composite partial pressure at 20 C, in mm Hg

VP_i = Vapor pressure of the "i"th ROC compound at 20 C, in mm Hg.

~~48.~~58. "Rubber": Rubber includes any natural or manmade rubber substrate, including but not limited to: styrene-butadiene rubber (SBR), polychloroprene (Neoprene), butyl rubber, nitrile rubber, chlorosulfonated polyethylene (CSM), and ethylene propylene diene terpolymer (EPDM).

~~49.~~59. "Rubber Flooring Adhesive": Any adhesive intended by the manufacturer for the installation of flooring material in which both the back and the top surface are made of synthetic rubber, and which may be in sheet or tile form.

- ~~50.~~60. "Sales Outlet": Any establishment at which adhesives, sealants, or primers can be sold in person to users of such products.
- ~~51.~~61. "Sealant Primer": Any product intended by the manufacturer to be applied to a substrate, prior to the application of a sealant, to enhance the bonding surface.
- ~~52.~~62. "Sealants": Any material with adhesive properties that is formulated primarily to fill, seal, waterproof or weatherproof gaps or joints between two surfaces. [Sealants include caulks.](#)
- ~~53.~~63. "Sheet-Applied Rubber Lining Operations": The process of applying sheet rubber liners by hand to metal or plastic substrates in order to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet rubber to fabric by hand.
- ~~54.~~64. "Single-Ply Roof Membrane Adhesive Primer": Any primer intended by the manufacturer to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding.
- ~~55.~~65. "Single-Ply Roofing Membrane Installation/Repair Adhesive": An adhesive intended by the manufacturer to be used for the installation or repair of a prefabricated single-ply flexible roofing membrane. Single-ply roofing membranes are field-applied using just one layer of membrane material. The containers must be labeled exclusively for such use. Installation includes, as a minimum, attaching the edge of the membrane to the edge of the roof and applying flashing to the vents, pipes and ducts that protrude through the membrane. Repair includes gluing the edges of tears together, attaching a patch over a hole, and reapplying flashings to vents, pipes or ducts installed through the membrane.
- ~~56.~~66. "Single-Ply Roofing Membrane Sealant": A sealant intended by the manufacturer to be used for the installation or repair of a prefabricated single-ply flexible roofing membrane. The containers must be labeled exclusively for such use.
- ~~57.~~67. "Solvent": Organic, petrochemical compounds, which are used as diluents, thinners, dissolvers, reducers, cleaning agents, or for similar uses.
- ~~58.~~68. "Solvent Cleaning": The use of solvent to remove loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants, which include, but are not limited to, dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas.
- ~~59.~~69. "Special Purpose Contact Adhesive": Any contact adhesive that is used to bond melamine covered board, metal, unsupported vinyl, Teflon, ultra-high molecular weight polyethylene, rubber, or wood veneer 1/16 inch or less thick to any porous or nonporous surface.
- ~~60.~~70. "Structural Glazing Adhesive": Any adhesive that is intended by the manufacturer to be used to adhere glass, ceramic, metal, stone, or composite panels to exterior building frames.
- ~~61.~~71. "Structural Wood Member Adhesive": Any adhesive intended by the manufacturer to be used for the construction of a load-bearing joint in wooden joists, trusses, or beams.

- ~~62~~72.. "Styrene-Acrylonitrile Welding ": Any adhesive intended by manufacturer to weld styrene-acrylonitrile co-polymer plastics. Bonding of styrene-acrylonitrile to any other substrate (such as metal) is not included under this plastic welding adhesive subcategory.
- ~~63~~73. "Subfloor Adhesive": Any adhesive intended by the manufacturer to be used for the installation of subflooring material over floor joists.
- ~~64~~74. Substrate Surface Preparation": Cleaning of a substrate to remove dirt, oils, and other contaminants. This surface cleaning is typically done prior to the application of primers, adhesives, or sealants.
- ~~65~~75. "Thermal Incineration": A direct-flame incinerator that depends on flame contact and high temperatures in the range of 1200 to 1500 °F to complete oxidation of ROCs. Thermal incinerators usually consist of refractory-lined chambers, burners, controllers, safety equipment and heat recovery equipment.
- ~~66~~76. "Thin Metal Laminating of Magnetic or Electronic Components": Any operation, excluding inkjet printer head assembly, that includes the bonding of multiple layers of metal to metal or metal to plastic in the production of electronic components or magnetic components, in which the bond line(s) is less than 0.25 mil.
- ~~67~~77. "Tire Repair": The repair of a hole, tear, fissure, or blemish in a tire casing by grinding or gouging, applying adhesive or sealant product and filling the hole or crevice with rubber.
- ~~68~~78. "Tire Retread": The process of tire retreading is where adhesives are applied to the back of precured tread rubber and to the casing and cushion rubber. It may also be used to seal buffed tire casings to prevent oxidation while the tire is being prepared for a new tread.
- ~~69~~79. "Top and Trim Adhesive": Any adhesive used to install automotive and marine trim, including, but not limited to headliners, vinyl tops, vinyl trim, sunroofs, dash covering, door covering, floor covering, panel covering, and upholstery.
- ~~70~~80. "Traffic Marking Tape": A preformed reflective film intended by the manufacturer to be applied to public streets, highways, and other surfaces, including but not limited to curbs, berms, driveways and parking lots.
- ~~71~~81. "Traffic Marking Tape Adhesive": Any adhesive intended by the manufacturer to be applied to surfaces prior to installation of traffic marking tape.
- ~~72~~82. "Undersea Based Weapons Systems Components": The fabricated part, assembly of parts or completed units of any portion of the missile launching system used on undersea ships.
- ~~73~~83. "VCT and Asphalt Tile Adhesive": Any adhesive intended by the manufacturer for the installation of Vinyl Composite Tile (VCT) or asphalt tile flooring. Vinyl composite tile is a material made from thermoplastic resins, fillers, and pigments.

84. “Vehicle Glass Adhesive Primer”: Any primer intended by the manufacturer to be applied to vehicle glass or to the frame of a vehicle prior to the installation or repair of the vehicle glass using an adhesive or sealant to improve adhesion to the pinch weld.

~~74.~~85. "Volatile Organic Compound (VOC)": Shall have the same meaning as Reactive Organic Compounds (ROC) as defined in Rule 2 of these Rules.

86. “Waterproof Resorcinol Glue”: Any two-part, resorcinol resin-based adhesive intended by the manufacturer to be used in applications where the bond line must be resistant to conditions of continuous immersion in fresh or salt water.

~~75.~~87. "Wood Flooring Adhesive": Any adhesive intended by the manufacturer for the installation of wood flooring, which may include but is not limited to parquet tiles, wood planks, or strip-wood.

2018 ENVIRONMENTAL FILING FEE CASH RECEIPT

Complete the information and submit with each set of documents presented for filing. Please provide an original set and (3) three sets of copies for filing.

**20181009-10018650-0 1/1**

Ventura County Clerk and Recorder
MARK A. LUNN
10/09/2018 02:31:43 PM
1391866 \$50.00 QU

RECEIPT NUMBER:

STATE CLEARINGHOUSE NUMBER (If applicable)

N.A.

LEAD AGENCY Ventura County APCD	LEAD AGENCY EMAIL stan@vcapcd.org	DATE 10-9-2018
COUNTY/STATE AGENCY OF FILING VENTURA COUNTY	DOCUMENT NUMBER —	
PROJECT TITLE Proposed Amendments to Rule 74.20, Adhesives & Sealants		
PROJECT APPLICANT NAME VCAPCD	PROJECT APPLICANT EMAIL stan@vcapcd.org	PHONE NUMBER (805) 645-1408
PROJECT APPLICANT ADDRESS 669 County Square Dr. 2nd Floor	CITY VENTURA	STATE CA
PROJECT APPLICANT (Check appropriate box)		ZIP CODE 93003
<input type="checkbox"/> Local Public Agency <input type="checkbox"/> School District <input checked="" type="checkbox"/> Other Special District <input type="checkbox"/> State Agency <input type="checkbox"/> Private Entity		

CHECK APPLICABLE FEES:

<input type="checkbox"/> Environmental Impact Report (EIR)	\$3,168.00	\$	_____
<input type="checkbox"/> Mitigated/Negative Declaration (MND)(ND)	\$2,280.75	\$	_____
<input type="checkbox"/> Certified Regulatory Program document (CRP)	\$1,077.00	\$	_____

☒ Exempt from fee

☒ Notice of Exemption (attach)

☐ CDFW No Effect Determination (attach)

☐ Fee previously paid (attach previously issued cash receipt copy)

<input type="checkbox"/> Water Right Application or Petition Fee (State Water Resources Control Board only)	\$850.00	\$	_____
<input checked="" type="checkbox"/> County documentary handling fee	\$50.00	\$	50.00
<input type="checkbox"/> Other		\$	_____

PAYMENT METHOD:

☐ Cash ☐ Credit ☐ Check ☒ Other

TOTAL RECEIVED \$ **50.00**

SIGNATURE Stan Cowen	AGENCY OF FILING PRINTED NAME AND TITLE STAN COWEN, Air Quality Engineer
Date 10-9-2018	Telephone Number (805) 645-1408

DO NOT WRITE BELOW THIS LINE

The following will be completed by the County Clerk's Office

Signature of person receiving payment:

Deputy County Clerk

Total Received: \$ **50.00**

Posted:

OCT 09 2018

through



Ventura County
Air Pollution
Control District

669 County Square Drive
Ventura, California 93003

tel 805/645-1400
fax 805/645-1444
www.vcapcd.org

Michael Villegas
Air Pollution Control Officer

October 9, 2018

Air Pollution Control Board
800 South Victoria Avenue
Ventura, CA 93009

FILED
DATE: **OCT 09 2018**
MARK A. LUNN
Ventura County Clerk and Recorder
By: [Signature], Deputy

SUBJECT: PUBLIC HEARING TO CONSIDER ADOPTION OF PROPOSED AMENDMENTS TO RULE 74.20, ADHESIVES AND SEALANTS; FIND THAT ADOPTION OF PROPOSED AMENDMENTS IS EXEMPT FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

RECOMMENDED ACTIONS:

1. Find that adoption of amended Rule 74.20 is categorically exempt from the California Environmental Quality Act (CEQA) (Attachment 1).
2. Approve and adopt the proposed legislative findings for the amendments to Rule 74.20 (Attachment 2).
3. Approve and adopt the amendments to Rule 74.20 (Attachment 3).
4. Direct the Clerk of the Board to forward two certified minute orders, and an affidavit of publication of the public hearing notice, for all proposed actions to the Air Pollution Control District within twenty days.
5. Direct Air Pollution Control Officer or his designee to file a CEQA Notice of Exemption pursuant to CEQA Guidelines Section 15062.

STATEMENT OF MATTER FOR BOARD CONSIDERATION:

Background

As a nonattainment area for the state ozone ambient air quality standards, Ventura County is subject to the requirements of the California Clean Air Act (Health & Safety Code § 39000 et seq.). In particular, Health and Safety Code Section 40914, subdivision (a), requires a five percent annual emission reduction in districtwide air pollutant emissions. However, Section 40914(b) provides an exemption from this annual five percent reduction in districtwide emissions if the District uses an alternative emission reduction strategy that (1) is equal to or better than the districtwide emission reduction effort; or (2) includes "all feasible measures" for attaining emission reductions and includes an expeditious adoption schedule.

POSTED
OCT 09 2018
MARK A. LUNN
Ventura County Clerk and Recorder
By: _____, Deputy

NOTICE OF EXEMPTION FROM CEQA

TO: County Clerk
County of Ventura
800 South Victoria Avenue
Ventura, CA 93009

FROM: Ventura County Air Pollution Control District
669 County Square Drive
Ventura, CA 93003

DATE: October 9, 2018

Project Title: Adoption of Amendments to Rule 74.20, Adhesives and Sealants

Project Location -- Specific: District-Wide

Project Location -- City: See above
Project Location -- County: Ventura County

Description of Nature, Purpose and Beneficiaries of Project:

Adoption of the proposed amendments to Rule 74.20 will reduce Reactive Organic Compound (ROC) emissions from the use of adhesives and sealants.

Name of Public Agency Approving Project:

Ventura County Air Pollution Control District

Name of Person or Agency Carrying Out Project:

Ventura County Air Pollution Control District

Exempt Status:

Categorical Exemption pursuant to Section 15307 (Actions by Regulatory Agencies for Protection of a Natural Resource) and Section 15308 (Actions by Regulatory Agencies for Protection of the Environment) of the CEQA Guidelines, and no exceptions to these exemptions apply.

Reasons Why Project Is Exempt:

Project will help improve air quality by reducing ROC emissions, which are precursors to ozone formation. This rule adoption will help Ventura County to attain the state and federal ambient air quality standards.

Contact Person:

Stan Cowen:
Air Pollution Control District
Telephone: (805) 645-1408

Date Received for Filing: Oct 9, 2018



Stan Cowen
Air Quality Engineer

[HOME](#) | [CONTACTS](#) | [ABOUT US](#) | [RESET PASSWORD](#) |[LOG OUT](#)

AdTech®

Order Tracking

[NEW PRINT ORDER](#)[NEW WEB ORDER](#)[COPY ORDER](#)[ORDER LOOKUP](#)[ORDER TRACKING](#)[OPEN \[0\]](#)[READY \[0\]](#)[SENT \[1\]](#)[ADVANCE COST \[0\]](#)[POSTED WEB ADS \[0\]](#)[MEDIA LOOKUP](#)[ACCOUNTING](#)[USAGE REPORTS](#)

Your order is sent!!

Customer Information

Customer Name VENTURA CO/BOARD OF SUPERVISORS[61680]
Address 800 S VICTORIA AV L#1920 , VENTURA CA - 93009
Phone/Fax (805)654-3398/(805)677-8711

Order Information

Attention Name JESSICA KAM
Billing Reference No.
Ad Description APCD Rule 74.20
Ad Type Legal-GOVERNMENT - NOTICE OF HEARING
Special Instructions

Orders Created

Order No.	Newspaper Name	Publishing Dates
3170562	VENTURA COUNTY STAR, CA Billed To: VENTURA CO/BOARD OF SUPERVISORS Created For: VENTURA CO/BOARD OF SUPERVISORS	09/06/2018

The Ad exists as an uploaded file.
Click [HERE](#) to view file.

A	R	I	S	E	S	S	C	A	M
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Yesterday's answer

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CROSSWORD

By THOMAS JOSEPH

ACROSS

- 45 Kitchen collection
1 Put away
5 Green hue

DOWN

- 1 Work byproduct
2 Señor's squiggle
3 Burger topper
4 Dripping
5 Yemen neighbor
6 "Why don't we!"
7 Reply to a knocker
8 Off course
9 Made blank
11 Spots

ACROSS

- 1 Put away
5 Green hue
10 Enter-tained
12 Poet's concern
13 Superior group
14 Baffled
15 Brouhaha
16 Stretching muscles
18 Affection-ate
20 Cobbler's cousin
21 Pale tan
23 Complete
24 Small change
26 Bout site
28 Pop's mate
29 Long account
31 Egg cells
32 Muscle connector

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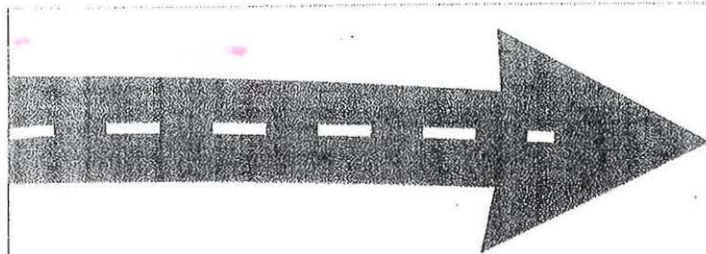
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The key
to selling
your car
starts
here

Buy it,
sell it,
find it
here

Conceptis Sudoku

4	9		6					
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Difficulty Level *** 9/06

Public Notices

NOTICE OF PUBLIC HEARING
BEFORE THE AIR POLLUTION
CONTROL BOARD
OF VENTURA COUNTY
FOR CONSIDERING THE ADOPTION OF AMENDMENTS TO
AIR POLLUTION CONTROL DISTRICT

Rule 74.20, Adhesives and Sealants

NOTICE IS HEREBY GIVEN that a public hearing will be held before the Air Pollution Control Board of Ventura County to consider adoption of amendments to Rule 74.20.

STAFF IS PROPOSING amendments to reduce Reactive Organic Compound (ROC) emissions from the use of adhesives and sealants as an Air Feasible Measure under the California Clean Air Act. These amendments will establish new lower ROC content limits for certain categories of adhesives, sealants, and adhesive primers. This proposal is based on recent amendments to South Coast AQMD Rule 116S, excluding these future limits regarding a future technology assessment.

INFORMATION REGARDING THE PROPOSED RULES, including the analysis required by

Victoria Avenue, Ventura, California. Any interested party has the privilege to attend and be heard on this matter.

DATED THIS 6th day of September 2018

MICHAEL POWERS,
Clerk of the Board of Supervisors, County of Ventura, State of California,
and ex-officio Clerk of the Ventura County Air Pollution Control Board

By: s/s Jessica Kam
Deputy Clerk of the Board
9/6/18

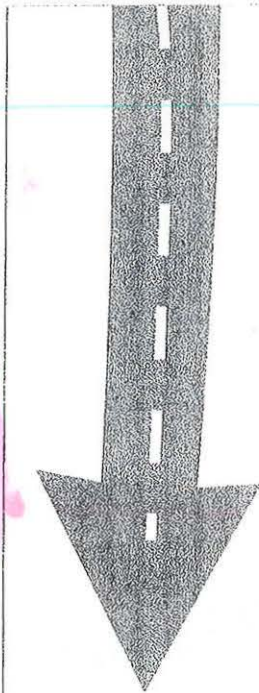
CNS-3170562#
VENTURA COUNTY STAR

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Difficulty Level ★★☆☆

9/16

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The key
to selling
your car
starts
here

Wheels/Recreation



Place your
ad online at

Where local
buyer & seller meet!

Buy it,
sell it,
find it
here

Merchandise



Where local
buyer & seller meet!

Public Notices

NOTICE OF PUBLIC HEARING BEFORE THE AIR POLLUTION CONTROL BOARD OF VENTURA COUNTY FOR CONSIDERING THE ADOPTION OF AMENDMENTS TO AIR POLLUTION CONTROL RULES

Rule 74.70 Adhesives and Sealants

NOTICE IS HEREBY GIVEN that a public hearing will be held before the Air Pollution Control Board of Ventura County to consider adoption of amendments to Rule 74.70.

STAFF IS PROPOSING amendments to reduce Reactive Organic Compound (ROC) emissions from the use of adhesives and sealants as an Air Toxics Measure under the California Clean Air Act. These amendments will establish new lower ROC content limits for certain categories of adhesives, sealants, and adhesive primers. This proposal is based on recent amendments to South Coast Rule 116, excluding these future limits requiring future technology assessment.

INFORMATION REGARDING THE PROPOSED RULES, including the analysis required by Health and Safety Code Section 40122.2, is available for review by any interested party at the Air Pollution Control District offices located at 509 Temple Square Drive, Ventura, California, 93003 and on the district website, www.vcapd.org. Written comments may be addressed to Stan Hansen at the District Office, (805) 645-1400, and should be received no later than September 10, 2016.

AS A RESULT of the public hearing, the Board (1) may adopt the rule amendments proposed by staff, or (2) may not adopt the rule amendments.

THE PUBLIC HEARING IS to be held before the Air Pollution Control Board on Tuesday, October 4, 2016, at 1:30 p.m. in the Board of Supervisors Meeting Room, Main Plaza Level of the Administration Building, Ventura County Government Center, 600 South

Public Notices

Victoria Avenue, Ventura, California. Any interested party has the privilege to attend and be heard on this matter.

DATED THIS 6th day of September 2016

MICHAEL POWERS, Clerk of the Board of Supervisors, County of Ventura, State of California, and ex officio Clerk of the Ventura County Air Pollution Control Board
By: s/s Jessica Kam
Deputy Clerk of the Board
9/6/16
CNS-3170562//
VENTURA COUNTY STAR

ACROSS

1 Put away
5 Green hue

10 Enter-
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12 Poet's
concern

13 Superior
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14 Baffled

15 Brouhaha

16 Stretching
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18 Affection-
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29 Long
account

31 Egg cells

32 Muscle
connector

36 Lease
signers

39 French
article

40 Market
action

41 More than
plump

43 External

44 Famous

45 Forgo
frugality

46 Kitchen

collection

DOWN

1 Work

byproduct

2 Señor's
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3 Burger
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5 Yemen

neighbor

6 "Why
don't we?"

7 Reply

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course

9 Made

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11 Spots

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AIR RESOURCES BOARD
VENTURA COUNTY APCD RULE EVALUATION FORM - Page 1

I. GENERAL INFORMATION

District: Ventura County APCD Rule No.: 74.20 Date Originally Adopted: June 8, 1993
 Rule Title: Adhesives and Sealants
 Date Submitted to ARB: October 23, 2018 If an Amended Rule, Date Last Amended: October 9, 2018
 Is the Rule Intended to be Sent to the U.S. EPA as a SIP Revision? (X) Yes () No If NO, do not complete remainder of form.
 District Contact: Stan Cowen Phone No.: 805/645-1408
 Narrative Summary of New Rule or Rule Changes: (X) Rule Change : Amended Rule 74.20 will reduce ROC emissions from the use of adhesives and sealants by reducing the ROC content limits of specified product categories.
 Pollutant(s) Regulated by the Rule (Circle): ROG NOx SO2 PM10 CO TAC

II. EFFECT ON EMISSIONS

Complete this section ONLY for rules that, when implemented, will result in quantifiable changes in emission. Attach reference(s) for emission factor(s) and other information. Attach calculation sheet showing how the emissions information provided below was determined. See staff report Appendix A for emission calculations.
 Net Effect on Emissions: () Increase(X) Decrease () N/A No impact on emissions. See attached staff report for emission reduction calculations. The net effect of the rule amendments is to reduce ROC emissions by 15 tons per year.

II. EFFECT ON EMISSIONS

Emission Reduction Commitment in SIP (Control Measure) for this source category: 2012 Triennial Assessment: New control measure and NOx emission reductions estimated at 40 tons per year.

Inventory Year Used to Calculate Changes in Emissions: 2014 Area Affected: County
 Future Year Control Profile Estimate:

Year	Tons/year Reductions	2016 Baseline Tons/year Subject to Rule	Control Level	Percent Control	Control Level	Control Factor
2023	15	/ 150	= 0.10	* 100 = 10%	1.00 - 0.10	= 0.90

AIR RESOURCES BOARD
VENTURA COUNTY APCD RULE EVALUATION FORM - Page 2

III. SOURCES/ATTAINMENT STATUS

District is: ☐ Attainment ☒ Nonattainment ☐ Split

Approximate Total Number of Small (<100 TPY) Sources Controlled by Rule: 11

Percent in Nonattainment Area: 100 %

Number of Large (>100 TPY) Sources Controlled: None Percent in Nonattainment Area: Not Applicable

IV. EMISSION REDUCTION TECHNOLOGY

Do the Rules Include Emission Limits that are Continuous? Yes.

V. OTHER REQUIREMENTS

RULE 74.34 (NOx Reductions from Miscellaneous Sources) Requirements include:	
Emission Limits:	Section B
Exemptions:	Section C
Recordkeeping Requirements	Section D
Test Methods & Procedures	Section E

VI. IMPACT ON AIR QUALITY PLAN

☒ No Impact ☐ Impacts RFP ☐ Impacts attainment

Discussion: Amended Rule 74.20 will reduce ROC emissions to further Ventura County's efforts toward achieving attainment of the ozone standard. Therefore, RFP will be furthered by adoption of this rule.

VENTURA COUNTY AIR POLLUTION CONTROL DISTRICT

RULE 74.20 - ADHESIVES AND SEALANTS

(Adopted 6/8/93, Revised 9/10/96, 1/14/97, 9/9/03, 1/11/05, 9/11/12, 10/09/18)

A. Applicability

The provisions of this rule apply to any person who supplies, sells, offers for sale, manufactures, solicits the application of, or uses adhesives, sealants, sealant primers or adhesive primers in Ventura County.

B. Requirements

1. Unless otherwise specified in Subsection B.2 or B.3, a person shall not apply any adhesives or any adhesive primers, which have an ROC content less water and exempt organic compounds in excess of 250 g/l (for low-solids adhesives or adhesive primers, the ROC content is based on a "grams per liter of material" basis).
2. Adhesives/Sealants/Adhesive Primers/Sealant Primers (Specific Applications): No person shall apply any adhesive, sealant or primer, which is defined under the following product categories, and has an ROC content, less water and exempt organic compounds in excess of the following limits, as applied (for low-solids adhesives, sealants or primers, the ROC content is based on a "grams per liter of material" basis).

Limits			
"Grams of ROC per Liter of Adhesive, Sealant or Primer Less Water and Exempt Organic Compounds"			
Category	Current Limit	Effective 7/1/2019	Effective 1/1/2023
Architectural Adhesive Products:			
Multipurpose Construction Adhesive	70		
Ceramic, Porcelain & Stone Wall Tile Adhesive	65		
Cove Base Adhesive	50		
Drywall Adhesive	50		
Flooring Adhesives:			
Ceramic, Porcelain, & Stone Floor Tile	65		
Outdoor Carpet	150	50	
Indoor Carpet or Carpet Pad	50		
Rubber Flooring	60		
Subfloor Adhesive	50		
VCT and Asphalt Tile	50		
Wood Flooring	100		20
Other Flooring	150	50	
Panel Adhesive	50		

Limits			
"Grams of ROC per Liter of Adhesive, Sealant or Primer Less Water and Exempt Organic Compounds"			
<u>Category</u>	<u>Current Limit</u>	<u>Effective 7/1/2019</u>	<u>Effective 1/1/2023</u>
Architectural Adhesive Products (cont.):			
Roofing Adhesives:			
Single Ply Roof Membrane	250		
Nonmembrane Roof	300		
Structural Glazing Adhesive	100		
Structural Wood Member Adhesive	140		
Miscellaneous Adhesives:			
Contact Adhesive	80		
Special Purpose Contact Adhesive	250		
Sheet-Applied Rubber Lining Operations	850		
Tire Retread	100		
Traffic Marking Tape Adhesive	150		
Top and Trim Adhesive	540		
Waterproof Resorcinol Glue	170		
Plastic Welding Products:			
ABS Welding	400	325	
ABS to PVC Transition Cement	510		
Cellulosic Plastic Welding (except ethyl cellulose)	100		
CPVC Welding	490		
PVC Welding	510		
Styrene-Acrylonitrile Welding	100		
Plastic Welding Primer	650	550	
Other plastic welding	500		
Adhesive Primers:			
Vehicle Glass Adhesive Primer	700		
Pressure Sensitive Adhesive Primer	785		
Other Adhesive Primer	250		
Sealants:			
Aerosol Insulating Foam Sealant	250		
Marine Deck	760		
Nonmembrane Roof	300		
Non-Staining Plumbing Putty	420	150	50
Potable Water Sealant	420	100	
Roadway Sealant	250		
Single-Ply Roof Membrane Sealant	450		
All Other Roof Sealants	420	300	
All Other Architectural Sealants (Non-Roof)	250	50	
All Other Sealants (Non-Architectural)	420		250

Limits
 "Grams of ROC per Liter of Adhesive, Sealant or Primer
 Less Water and Exempt Organic Compounds"

<u>Category</u>	<u>Current Limit</u>
Sealant Primers:	
Architectural Nonporous	250
Architectural Porous	775
Marine Deck	760
Other Sealant Primers	750

3. Adhesives (Substrates or Nonspecific Operations): No person shall apply any adhesive to a substrate with an ROC content, "less water and exempt organic compounds" in excess of the following limits, as applied (for low-solid adhesives, sealants or primers, the ROC content is based on a "grams per liter of material basis").

If an adhesive is used to bond dissimilar substrates, the applicable substrate category with the highest ROC limit shall be the limit for that operation. If an operator uses an adhesive product listed in Subsection B.2, then the requirement in that section applies rather than this one.

Limits
 "Grams of ROC per Liter of Adhesive
 Less Water and Exempt Organic Compounds"

<u>Substrate/Application</u>	<u>Current Limit</u>
Fiberglass	80
Flexible Vinyl	250
Metal to Metal	30
Plastic Foam	50
Porous Material (Except Wood and Plastic Foam)	50
Wood	30

4. Substrate Surface Preparation:

No person shall use a material for substrate surface preparation that exceeds the following applicable limit:

<u>Category</u>	<u>Type of Limit</u>	<u>Limit</u>
Inkjet Printer Head Assembly	ROC Content	200 g/l of material
All Others	ROC Content	25 g/l of material

5. Solvent Cleaning:

No person shall use ROC-containing materials for solvent cleaning unless the ROC content is 25 grams per liter of material or lower.

6. Storage of ROC-Containing Materials: All ROC-containing materials, including but not limited to, adhesives, sealants, coatings, cleanup solvents or surface preparation materials, shall be stored in closed containers, which are nonabsorbent and do not leak. These storage containers shall be closed except when filling or emptying.

7. Adhesive Spray Application Equipment Cleaning:

No person shall use ROC-containing materials for the cleaning of spray application equipment used in adhesive operations unless a solvent containing no more than 25 grams of ROC per liter of material shall be used for cleaning, flushing or soaking of filters, flushing lines, pipes, pumps, and other parts of the application equipment.

8. Add-on Control Equipment Option: In lieu of complying with the provisions of Subsections B.1, B.2 or B.3, emissions of ROC may be controlled by an emission capture and control system, which reduces ROC emissions to the atmosphere, provided that:

- a. The combined control and capture efficiency reduces emissions by at least 85 percent, by weight, during any period of continuous operation not to exceed 24 hours, and
- b. Written approval for such equipment, in the form of an Authority to Construct and a Permit to Operate is received from the Air Pollution Control Officer (APCO).

9. Adhesive Strippers: No person shall use an adhesive stripper unless its ROC composite partial pressure is 9.5 mm Hg or less at 20 °C.

10. Primers, Sealants or Adhesives Containing 1,1,1-Trichloroethane or Methylene Chloride: No person shall apply any primer, sealant or adhesive to any surface, if that product contains any 1,1,1-trichloroethane or methylene chloride. Adhesives containing methylene chloride used to plastic weld the following plastic substrates are exempt from this requirement:

- a. Polycarbonate
- b. Polysulfone
- c. Acrylics including Polymethylmethacrylate (PMMA)
- d. Phenylene-Oxide based resins
- e. Polyetherimide

11. Prohibition of Specification: No person shall solicit, require for use, or specify the application of any adhesive, primer or sealant, if such use or application results in a violation of the provisions of this Rule. This prohibition shall apply to all written or oral contracts.

12. Compliance Statement Requirement: The manufacturer of any adhesive, sealant, sealant primer or adhesive primer subject to this rule shall include a designation of the maximum ROC or VOC content as supplied, including adhesive components, expressed in grams per liter or pounds per gallon excluding water and exempt organic compounds from the appropriate test method in Section E or based on product formulation data, on containers and data sheets. This designation shall include recommendations regarding thinning, reducing, or mixing with any other ROC or VOC-containing materials. This statement shall include the maximum ROC or VOC on an as-applied basis when used in accordance with the manufacturer's recommendations.
13. Liquid Cleaning Material Compliance Statement: The manufacturer of liquid cleaning materials subject to this rule shall designate on product containers and data sheets the ROC content of cleaning materials as supplied. This designation shall include recommendations regarding mixing with any other ROC containing materials, and express the cleaning material ROC content when used in accordance with the manufacturer's recommendations. All letters and numbers used to designate ROC or VOC content on product labels shall be visible and legible.
14. Prohibition of Sales:
 - a. Except as provided in Subsections B.14.c, B.14.d, or B.14.e, no person shall supply, sell, or offer for sale any adhesive, sealant or primer which, at the time of sale, is defined under a product category in Subsection B.2, and exceeds the ROC limits listed in Subsection B.2 after the specified effective dates. This provision only applies to products that are supplied to or sold to persons within the District.
 - b. Except as provided in Subsections B.14.c, B.14.d, or B.14.e, no person shall supply, sell, or offer for sale any adhesive, sealant, or primer which, at the time of sale, contains any 1,1,1-trichloroethane or methylene chloride, except for those adhesives designed to plastic weld polycarbonates, polysulfones, acrylics, phenylene oxide based resins or polyetherimides.
 - c. The sales prohibition in Subsections B.14.a and B.14.b shall not apply to any supplier or seller of any adhesive, sealant or primer as follows:
 - 1) Any adhesive shipped outside of the District for use outside of the District.
 - 2) The sale of adhesives to a user who has installed an APCD permitted ROC add-on control device.
 - d. The sales prohibitions in Subsections B.14.a and B.14.b shall not apply to the sale of any adhesive, sealant, or primer, except plastic welding products and except aerosol insulating foam sealants, if:
 - 1) The adhesive, sealant, or primer is sold in any container(s) having a capacity of 16 ounces or less (net volume) or 1 pound or less (net weight); and

- 2) The total weight or volume of two or more containers packaged together must be less than 1 pound or 16 ounces, respectively, to qualify for this exemption.
- e. The sales prohibitions in Subsections B.14.a and B.14.b shall not apply to any manufacturer of any adhesive, sealant, or primer if the manufacturer has provided an accurate compliance statement and if:
 - 1) The product was not sold directly to a user or a sales outlet located in the District, or
 - 2) The product was sold to an independent distributor that is not a subsidiary of, or under the direct control of the manufacturer.
15. Sell-Through and Use-Through Provision: Any adhesive or sealant that is manufactured prior to the effective date of the applicable ROC content limit in Subsection B.2 and that has an ROC content limit above that limit (but not above the limit in effect at the date of manufacture) may be sold, supplied, or offered for sale for up to three years after the specified effective date and may be used up to four years after the specified effective date as long as the date of manufacture is clearly visible on the container (or code for manufacture date has been provided to the District) . This provision shall not apply to those adhesives or sealants subject to current ROC limits in Subsection B.2.

C. Exemptions

1. This rule, except Section B.14, shall not apply to any stationary source that emits less than 200 pounds of ROC in every rolling period of 12 consecutive calendar months from adhesive and sealant operations. Emissions from cold cleaners, vapor degreasers, and aerosol products shall not be included in this determination. Any person claiming this exemption shall provide monthly records sufficient to substantiate this claim.
2. Exemption of Operations Subject to Other District Rules: The provisions of this rule shall not apply to the following operations that are subject to other District rules.
 - a. Assembling, manufacturing and repairing of aerospace components subject to Rule 74.13, excluding manufacturing of aircraft tires.
 - b. Any graphic arts operation subject to the requirements of Rule 74.19, Graphic Arts.
 - c. Any screen printing operation subject to the requirements of Rule 74.19.1, Screen Printing Operations.
3. Exemption of Specific Operations from ROC Standards for Adhesives/Sealants/Primers: The ROC limits of Subsections B.1, B.2, and B.3 of this rule shall not apply to the following operations.

- a. Assembling and manufacturing of undersea-based weapon systems.
 - b. Testing and evaluation of adhesive or sealant products in any research and development or analytical laboratories.
 - c. Plastic welding operations used in the manufacturing of medical devices.
 - d. Tire repair operations, provided the label on the adhesive used states "For Tire Repair Only".
 - e. Field installation or repair of potable water linings and covers at potable water treatment, potable water storage, or potable water distribution facilities. Potable water treatment is any process that will improve the quality of water to make it exceed or meet applicable drinking water standards.
 - f. Manufacturing operations of the following products: diving suits, rubber fuel bladders, inflatable boats, life preservers or other stand-alone elastomeric type products designed for immersion in liquids. The adhesive products used by these operations must be labeled "For the bonding of immersible products only."
 - g. Inkjet printer head assembly operations where the ROC content of the adhesive used for laminating is less than 100 grams per liter of material.
 - h. Thin film laminating operations of magnetic or electronic components excluding inkjet printer head assembly operations.
 - i. Glass bonding and priming processes in automotive convertible top manufacturing operations.
4. Exemption of Specific Adhesives and Sealants:
- a. Any adhesive, primer, or sealant that contains less than 20 grams of ROC per liter of material is exempt from all the provisions of this rule.
 - b. Any aerosol adhesive (except aerosol insulating foam sealant) is exempt from all provisions of this rule.
 - c. Any cyanoacrylate or methacrylate-based adhesive is exempt from all provisions of this rule.
 - d. Any adhesive tape is exempt from all provisions of this rule.
 - e. Any low pressure (less than 250 psi) or high pressure (1,000 to 1,300 psi) two-component spray polyurethane foam system that uses exempt organic compounds as the blowing agent and that uses ancillary spray equipment and hoses to apply the foam.

- f. Any one-component spray polyurethane foam system in a cylinder (containing not less than 10 pounds and not more than 23 pounds of prepolymerized mixtures) that uses exempt organic compounds as the blowing agent and that uses ancillary spray equipment or hoses to apply the foam.
- 5. The provisions of Subsection B.3 of this rule shall not apply to any person who uses less than 10 gallons per rolling period (consisting of 12 consecutive calendar months) per stationary source of an adhesive, a sealant, or primer in a separate formulation provided the total volume of noncomplying adhesives, sealants, or primers at a stationary source does not exceed 55 gallons per rolling period (consisting of 12 consecutive calendar months). If a specific adhesive, sealant, sealant primer or adhesive primer can be defined under one of the product categories in Subsection B.2, then this exemption does not apply. Any person seeking to claim this exemption shall notify the APCO in writing that a complying adhesive, sealant or primer is not available and maintain records sufficient to substantiate this claim.

D. Recordkeeping

- 1. Any person subject to this rule shall:
 - a. Maintain a current list of all adhesives, sealants, primers, strippers and solvents that provides all information necessary to evaluate compliance including the following, as applicable:
 - 1) The name and manufacturer of each ROC-containing material including any catalysts, reducers, or other components used.
 - 2) Mix ratio, if applicable.
 - 3) ROC content (less water and exempt organic compounds except low-solids coatings, which are expressed as grams per liter of material basis), as applied,
 - 4) ROC composite partial pressure of the adhesive stripper.
 - 5) Applicable ROC content limit or ROC composite partial pressure limit from Section B.
 - b. Maintain records of the monthly volume of each complying adhesive, sealant, primer, solvent, or stripper used that is required to be tracked by a District permit condition.
 - c. Maintain records of the daily volume of each noncompliant adhesive, sealant, primer, solvent or stripper used. Adhesives, sealants or primers qualifying for the exemption in Subsection C.5 shall not be subject to this daily recordkeeping requirement.

- d. Any person using an emission control system as a means of complying with this rule shall maintain daily records of key system operating and maintenance procedures which will demonstrate continuous operation and compliance of the emission control device during periods of emission producing activities.
2. All records shall be retained for at least two (2) years from the date of each entry and shall be available to District personnel upon request.

E. Test Methods

1. The ROC and solids content of all adhesives products, sealants, primers and cleaning solvents, except as specified in Section E.3, shall be determined using EPA Reference Method 24 (40 CFR Part 60, Appendix A), South Coast AQMD: Laboratory Method 304 (Determination of Volatile Organic Compounds in Various Materials), or SCAQMD Method 313 (Determination of Volatile Organic Compounds by Gas Chromatography-Mass Spectrometry).
2. Exempt organic compounds shall be determined using ASTM D4457-91 or SCAQMD Laboratory Method 303. For exempt compounds where no reference test method is available, a facility requesting the exemption shall provide appropriate test methods approved by the APCO and approvable by the U.S. EPA.
3. The ROC content of any plastic welding product shall be determined using Proposed SCAQMD Laboratory Method of Analysis for Enforcement Samples, Method 316a-92, "Determination of VOC in Material Used for Pipes and Fittings" (October 1996).
4. The capture efficiency shall be determined according to EPA's technical document, "Guidelines for Determining Capture Efficiency," January 9, 1995, and Methods in 40 CFR 51 Appendix M, Methods 204-204F, as applicable:
Methods 204, Criteria for and Verification of a Permanent or Temporary Total Enclosure
Method 204A, VOC content in Liquid Input Stream
Method 204B, VOC Emissions in Captured Stream
Method 204C, VOC Emissions in Captured Stream (Dilution Technique)
Method 204D, VOC Emissions in Uncaptured Stream from Temporary Total Enclosure
Method 204E, VOC Emissions in Uncaptured Stream from Building Enclosure, and
Method 204F, VOC Content in Liquid Input Streams (Distillation Approach)

Control system efficiency shall be determined by 40 CFR 60, Appendix A, Method 18, "Measurement of Gaseous Organic Compound Emissions by Gas Chromatography", Method 25, "Determination of Total Gaseous Nonmethane Organic Emissions as Carbon" or Method 25A, "Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer."
5. ROC composite partial pressure shall be calculated using a widely accepted published source such as: Boublik, T., V. Fried and E. Hala, "The Vapor Pressure of Pure Substances," Elsevier Scientific Publishing Co. New York (1973); Perry's Chemical Engineer's

Handbook, McGraw-Hill Book Company; CRC Handbook of Chemistry and Physics, Chemical Rubber Publishing Company (1986-87), and Lange's Handbook of Chemistry, John A. Dean, editor, McGraw-Hill Book Company (1985). The true vapor pressure of a component in a mix may be determined by ASTM Method D2879-96. The ROC composite pressure of a solvent mix consisting entirely of ROC may be determined by ASTM Method D2879-97, "Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope."

6. If applicable, the ROC content of reactive adhesives may be determined using EPA Method Appendix A to Subpart PPPP of Part 63 – Determination of Weight Volatile Matter Content and Weight Solids Content of Reactive Adhesives. This method is a sandwich method where the adhesive cures between two substrates to prevent moisture in the atmosphere from competing with the reaction taking place in the adhesive. This method may not be used for one-part moisture-cured urethanes, silicone adhesives, or reactive sealants.

F. Violations

Failure to comply with any provision of this rule, including the requirement to maintain records or supply VOC or ROC information, or supply ROC composite partial pressure information, shall constitute a violation of this rule. Noncompliance determined by any test method specified or referenced in this Rule is a violation of this Rule. Where more than one approved test method may be applicable, sources shall not be required to demonstrate compliance using more than one approved test method.

G. Definitions

1. "ABS Welding Adhesive": Any adhesive that is intended by the manufacturer to weld acrylonitrile styrene (ABS) plastic. ABS is made by reacting monomers of acrylonitrile, butadiene, and styrene and is normally identified with ABS marking.
2. "ABS to Polyvinyl Chloride (PVC) Transition Cement": Any plastic welding adhesive that is intended by the manufacturer to join ABS to PVC building drains or building sewers.
3. "Acrylic": Acrylic is any thermoplastic polymer or copolymer of acrylic acid, methacrylic acid, ester of these acids, or acrylonitrile. Acrylic contains at least one version of a methacrylate monomer, including but not limited to: methylmethacrylate or butylmethacrylate.
4. "Adhesive": Any substance that is used to bond one surface to another surface by attachment.
5. "Adhesive Primer": Any film-forming material applied to a substrate, prior to the application of an adhesive or adhesive tape, to increase adhesion or film bond strength, promote wetting, or form a chemical bond with a subsequently applied adhesive.

6. "Adhesive Tape": Any backing material coated with an adhesive, and includes, but is not limited to, drywall tape, heat sensitive tape, pressure sensitive adhesive tape, and water-activated tape.
7. "Aerosol Insulating Foam Sealant": Any 8 ounce to 30 ounce aerosolized can of polyurethane prepolymer foam used to fill and form a durable, airtight, water-resistant seal to common building substrates, such as wood, brick, concrete, foam board, and plastic. This sealant is intended by the manufacturer to be used for hand-held applications.
8. "Adhesive Stripper": A volatile liquid applied to remove a cured or dried adhesive.
9. "Aerosol Adhesive": Any adhesive packaged as an aerosol product in which the spray mechanism is permanently housed in a nonrefillable can designed for hand-held application without the need for ancillary hoses or spray equipment. Aerosol adhesives include special purpose adhesives, mist spray adhesives, and web spray adhesives, as defined by the California Air Resources Board consumer product regulation found in Title 17 of the California Code of Regulations, beginning at Section 94507.
10. "Architectural Appurtenance": Any accessory to a stationary structure, including, but not limited to, hand railings, cabinets, bathroom and kitchen fixtures, fences, rain gutters and downspouts, window screens, lamp posts, heating and air conditioning equipment, other mechanical equipment, large fixed stationary tools, signs, motion picture and production sets, and concrete forms, excluding aquariums.
11. "Architectural Sealant Primer- Nonporous": Any sealant primer intended by the manufacturer to be applied to nonporous material surfaces on stationary structures, including mobile homes, and their appurtenances.
12. "Architectural Sealant Primer- Porous": Any sealant primer intended by the manufacturer to be applied to porous material surfaces on stationary structures, including mobile homes, and their appurtenances.
13. "Architectural Sealant": Any sealant intended by the manufacturer to be applied on stationary structures, including mobile homes, and their appurtenances.
14. "Capture Efficiency": The percentage of ROC used, emitted, evolved, or generated by the operation, that is collected, and directed to an air pollution control device.
15. "Carbon Adsorption": A carbon unit that is typically either a fixed-bed or a fluidized-bed design. ROC-laden air is pretreated, if necessary, to remove any solids, liquids, and long-chain, high-boiling organic compounds that might coat the carbon. The exhaust stream then passes through the adsorbing bed where the ROCs collect on the surface of the carbon.
16. "Catalytic Incinerator": An incinerator that requires a catalyst to promote the oxidation of the ROCs at a lower temperature. The catalyst is often, but not always, a platinum serial metal deposited in a porous form onto a structure, such as a honeycomb, or pellets. The

ROCs are preheated up to 650 to 900 °F and then enter the catalyst area. There the oxidation of the ROCs continues to produce an increase in temperature across the catalyst bed.

17. "Cellulosic Plastics": Any plastic containing the naturally occurring polymer or polysaccharide, cellulose (C₆H₁₀O₅)_n. Examples include cellulose acetate, cellulose acetate butyrate, cellulose nitrate and cellulose propionate.
18. "Ceramic, Porcelain, and Stone Tile Installation Adhesive": Any adhesive that is intended by the manufacturer to be used for installation of tile products.
19. "Contact Adhesive": Any adhesive that is intended by the manufacturer to adhere to itself instantaneously upon contact and is indicated by the label or data sheet as a contact adhesive. This adhesive is applied to both adherents and allowed to become dry, which develops a bond when the adherents are brought together without sustained pressure. For the purpose of this rule, products that qualify as a contact adhesive using the above definition, and that are labeled exclusively for only one of the following applications shall not be required to meet the ROC limit for "Contact Adhesives" in Subsection B.2:
 - a. Single-ply roofing
 - b. Bonding of immersible products
 - c. Bonding of flexible vinyl to flexible vinyl
 - d. Nonmembrane roofing
20. "Cove Base Installation Adhesive": Any adhesive that is intended by the manufacturer to be used for cove base (or wall base) installation. The cove base is generally made of vinyl or rubber, and is installed on a wall or vertical surface at floor level.
21. "CPVC Welding": Any adhesive intended by the manufacturer for the welding of CPVC (chlorinated polyvinyl chloride) plastic. CPVC is a polymer of the monomer that contains 67 percent chlorine and is normally identified with a CPVC marking.
22. "Cyanoacrylate Adhesive": Any adhesive that is a single-component reactive diluent adhesive that contains at least 85 percent by weight, methyl, ethyl, methoxymethyl or other functional groupings of cyanoacrylate.
23. "Dry Wall Adhesive": An adhesive that is intended by the manufacturer to be used to install gypsum dry wall to studs or solid surfaces.
24. "Energy Curable Adhesives and Sealants": Single-component reactive products that cure upon exposure to visible-light, ultra-violet light, or to an electron beam. The VOC content of thin film Energy Curable Adhesives and Sealants may be determined by manufacturers using ASTM Method 7767-11, Standard Test Method to Measure Volatiles from Radiation Curable Acrylate Monomers, Oligomers, and Blends and Thin Coatings Made from Them.

25. "Exempt Organic Compounds": As defined in Rule 2, Definitions, of these Rules, except for the purpose of this rule, exempt organic compounds shall also include the following foam blowing agents:
- trans-1,3,3,3-tetrafluoropropene (HFO-1234ze)
 - trans-1-chloro-3,3,3-trifluoropropene (HFO-1233zd)
 - cis-1,1,1,4,4,4-hexafluoro-2-butene (HFO-1336mzz-Z) Note: The inclusion of this compound as an exempt ROC shall not become effective until EPA adopts a final rule confirming its exempt VOC status.
26. "Fiberglass": Fiberglass is any fiber reinforced plastic (FRP) surface that has fiber material set in a binding substance of plastic resins.
27. "Flexible vinyl": Nonrigid polyvinyl chloride plastic with at least five percent, by weight, of plasticizer content. A plasticizer is a material, such as a high-boiling point organic solvent, that is incorporated into an adhesive to increase its flexibility, workability, or distensibility, and may be determined using ASTM Method E260-91 or from product formulation data.
28. "Grams of ROC per liter of Adhesive, Sealant, or Primer, less water and exempt organic compounds": The weight of ROC per combined volume of ROC and coating solids calculated using the following equation:

$$\begin{array}{l} \text{Grams of ROC per Liter of Adhesive} \\ \text{Less Water and Exempt Organic Compound} = \end{array} \quad \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

Where: W_s = Weight of volatile compounds (grams)
 W_w = Weight of water (grams)
 W_{es} = Weight of exempt organic compounds (grams)
 V_m = Volume of material (liters)
 V_w = Volume of water (liters)
 V_{es} = Volume of exempt organic compounds (liters)

29. "Grams of ROC per Liter of Material": The weight of ROC per volume of material shall be calculated using the following equation:

$$\begin{array}{l} \text{Grams of ROC per Liter of Material} \\ = \end{array} \quad \frac{W_s - W_w - W_{es}}{V_m}$$

Where: W_s = Weight of volatile compounds (grams)
 W_w = Weight of water (grams)
 W_{es} = Weight of exempt organic compounds (grams)
 V_m = Volume of material (liters)

30. "Gun Washer": Electrically or pneumatically operated system that is designed to clean spray application equipment and minimize emissions. A gun washer may also be considered a gun

cleaning system that consists of spraying solvent into an enclosed container using a snug fitting.

31. "Inkjet Printer Head Assembly Operation": Any operation used to manufacture or assemble the printer head used on inkjet printers. Inkjet printing is a printing method where the liquid ink is transferred at high velocity through a small diameter opening(s) to a solid substrate.
32. "Low Emission Spray Gun Cleaner": Any properly used spray gun equipment cleanup device which has passive solvent losses of no more than 0.6 grams per hour and has active solvent losses of no more than 15 grams per operating cycle as defined by the test method in Subsection E.6.
33. "Low-Solids Adhesive, Sealant or Primer": Any product that has less than one pound of solids per gallon of material (120 grams or less of solids per liter of material). Such solids are the non-volatiles remaining after a sample is heated at 110°C for one hour.
34. "Marine Deck Sealant": Any sealant intended by the manufacturer to be applied to wooden marine decks.
35. "Marine Deck Sealant Primer": Any sealant primer intended by the manufacturer to be applied to wooden marine decks.
36. "Multipurpose Construction Adhesives": Any adhesive that is intended by the manufacturer to be used for the installation or repair of various construction materials or to bond architectural appurtenances, including but not limited to drywall, subfloor, panel, tileboard, deck and lumber, seams, fiberglass reinforced plastic (FRP), ceiling tile and acoustical tile. Adhesives used to bond uninstalled cabinets, counters, and other architectural appurtenances are subject to this adhesive category.
37. "Nonmembrane Roof Sealant/Adhesive": Any sealant or adhesive that is intended by the manufacturer to install or repair nonmembrane roofs and that is not intended for the installation of prefabricated single-ply flexible roofing membranes. This category includes plastic or asphalt roof cement, asphalt roof coatings, and cold application cement.
38. "Outdoor Carpet Adhesive": Any adhesive intended by the manufacturer for the installation of carpet or artificial turf that is not in an enclosure and is exposed to ambient weather conditions.
39. "Non-Staining Plumbing Putty": Any non-staining sealant intended by the manufacturer to be provide watertight seals around faucets and drains, and is formulated to be used on granite, marble, quartz, sandstone, or any other natural surfaces.
40. "Panel Adhesive": An adhesive that is intended by the manufacturer to be used for the installation of plywood, pre-decorated hardboard (or tileboard), fiberglass reinforced plastic, and similar pre-decorated or non-decorated panels to studs or solid surfaces.

41. "Percent ROC by Weight": The ratio of the weight of ROC to the weight of the material, expressed as a percentage by weight. The percent ROC by weight is calculated as follows:

$$\% \text{ ROC weight} = \frac{W_v}{W} \times 100$$

Where W_v = Weight of the ROCs (grams)
 W = Weight of the Material (grams)

42. "Plastic Welding Primer": Any primer intended by the manufacturer to prepare plastic substrates prior to welding.
43. "Plastic Foam": Any rigid or spongy cellular plastic mass with gas bubbles dispersed throughout. Examples include but are not limited to: urethane foams, PVC foams, Styrofoam, Foamboard and polyethylene foams.
44. "Plastic Welding": The use of solvent-based adhesives to dissolve plastic surfaces to form a weld-like bond between mating surfaces.
45. "Plastic Welding Products": Any product intended by the manufacturer to weld plastic substrates, or to prepare plastic substrates prior to welding. These products include ABS welding products, cellulosic plastic welding products, CPVC welding products, PVC welding products, styrene-acrylonitrile welding products, plastic welding primers, and other plastic welding products.
46. "Plastics": Synthetic materials chemically formed by the polymerization of organic (carbon-based) materials.
47. "Polycarbonate": Polycarbonate is a type of thermoplastic "structural" foam and contains a plastic resin that can be found in Lexan manufactured by General Electric Company or in Tuffrak manufactured by Rohm and Haas Company.
48. "Porous Material": A material whose surface is permeable to liquids; such materials include but are not limited to paper, and corrugated paperboard.
49. "Potable Water Sealant": Any sealant intended by the manufacturer to be used in water treatment or water distribution applications, which requires compliance with NSF/ANSI Standard 61: Drinking Water System Components – Health Effects.
50. "Pressure Sensitive Adhesive": Any adhesive intended by the manufacturer to form a bond when pressure is applied (without the need for solvent, water, or heat) and is typically applied to backings or release liners.

51. "Pressure Sensitive Adhesive Primer": Any adhesive primer intended by the manufacturer to be applied during the application of a pressure sensitive adhesive product. This primer will result in the increased adhesion or shorter cure times of the applied adhesive.
52. "PVC Welding Adhesive": Any adhesive intended by manufacturer to weld polyvinyl chloride (PVC) plastic. PVC plastic is a polymer of the chlorinated vinyl monomer that contains 57 percent chlorine and which is normally identified with a PVC marking.
53. "Reactive Organic Compounds (ROC)": As defined in Rule 2, Definitions, of these Rules. The term "volatile organic compound" (VOC) is equivalent to ROC.
54. "Reactive Adhesives": Any adhesive that is composed of monomers that become integral parts of the cured product through chemical reactions. Reactive products include, but are not limited to, polyurethane and two-component regulated products.
55. "Roadway Sealant": Any sealant intended by the manufacturer to be applied to public streets, highways, and other surfaces, including but not limited to curbs, berms, driveways and parking lots.
56. ROC Composite Partial Pressure": The sum of the partial pressures of the compounds defined as ROCs. ROC composite partial pressure is calculated as follows:

$$PP_C = \frac{\sum_{i=1}^n \left(\frac{W_i}{MW_i} \right) (VP_i)}{\left(\frac{W_w}{MW_w} \right) + \sum_{e=1}^n \left(\frac{W_e}{MW_e} \right) + \sum_{i=1}^n \left(\frac{W_i}{MW_i} \right)}$$

Where:

W_i = Weight of the "i"th ROC compound, in grams

W_w = Weight of water, in grams

W_e = Weight of the "e"th exempt organic compound, in grams

MW_i = Molecular weight of the "i"th ROC compound, in g/(g-mole)

MW_w = Molecular weight of water, in g/(g-mole)

MW_e = Molecular weight of the "e"th exempt organic compound, in g/(g-mole)

PP_C = ROC composite partial pressure at 20 C, in mm Hg

VP_i = Vapor pressure of the "i"th ROC compound at 20 C, in mm Hg.

57. "Rubber": Rubber includes any natural or manmade rubber substrate, including but not limited to: styrene-butadiene rubber (SBR), polychloroprene (Neoprene), butyl rubber, nitrile rubber, chlorosulfonated polyethylene (CSM), and ethylene propylene diene terpolymer (EPDM).
58. "Rubber Flooring Adhesive": Any adhesive intended by the manufacturer for the installation of flooring material in which both the back and the top surface are made of synthetic rubber, and which may be in sheet or tile form.

59. "Sales Outlet": Any establishment at which adhesives, sealants, or primers can be sold in person to users of such products.
60. "Sealant Primer": Any product intended by the manufacturer to be applied to a substrate, prior to the application of a sealant, to enhance the bonding surface.
61. "Sealants": Any material with adhesive properties that is formulated primarily to fill, seal, waterproof or weatherproof gaps or joints between two surfaces. Sealants include caulks.
62. "Sheet-Applied Rubber Lining Operations": The process of applying sheet rubber liners by hand to metal or plastic substrates in order to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet rubber to fabric by hand.
63. "Single-Ply Roof Membrane Adhesive Primer": Any primer intended by the manufacturer to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding.
64. "Single-Ply Roofing Membrane Installation/Repair Adhesive": An adhesive intended by the manufacturer to be used for the installation or repair of a prefabricated single-ply flexible roofing membrane. Single-ply roofing membranes are field-applied using just one layer of membrane material. The containers must be labeled exclusively for such use. Installation includes, as a minimum, attaching the edge of the membrane to the edge of the roof and applying flashing to the vents, pipes and ducts that protrude through the membrane. Repair includes gluing the edges of tears together, attaching a patch over a hole, and reapplying flashings to vents, pipes or ducts installed through the membrane.
65. "Single-Ply Roofing Membrane Sealant": A sealant intended by the manufacturer to be used for the installation or repair of a prefabricated single-ply flexible roofing membrane. The containers must be labeled exclusively for such use.
66. "Solvent": Organic, petrochemical compounds, which are used as diluents, thinners, dissolvers, reducers, cleaning agents, or for similar uses.
67. "Solvent Cleaning": The use of solvent to remove loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants, which include, but are not limited to, dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas.
68. "Special Purpose Contact Adhesive": Any contact adhesive that is used to bond melamine covered board, metal, unsupported vinyl, Teflon, ultra-high molecular weight polyethylene, rubber, or wood veneer 1/16 inch or less thick to any porous or nonporous surface.
69. "Structural Glazing Adhesive": Any adhesive that is intended by the manufacturer to be used to adhere glass, ceramic, metal, stone, or composite panels to exterior building frames.
70. "Structural Wood Member Adhesive": Any adhesive intended by the manufacturer to be used for the construction of a load-bearing joint in wooden joists, trusses, or beams.

71. "Styrene-Acrylonitrile Welding ": Any adhesive intended by manufacturer to weld styrene-acrylonitrile co-polymer plastics. Bonding of styrene-acrylonitrile to any other substrate (such as metal) is not included under this plastic welding adhesive subcategory.
72. "Subfloor Adhesive": Any adhesive intended by the manufacturer to be used for the installation of subflooring material over floor joists.
73. "Substrate Surface Preparation": Cleaning of a substrate to remove dirt, oils, and other contaminants. This surface cleaning is typically done prior to the application of primers, adhesives, or sealants.
74. "Thermal Incineration": A direct-flame incinerator that depends on flame contact and high temperatures in the range of 1200 to 1500 °F to complete oxidation of ROCs. Thermal incinerators usually consist of refractory-lined chambers, burners, controllers, safety equipment and heat recovery equipment.
75. "Thin Metal Laminating of Magnetic or Electronic Components": Any operation, excluding inkjet printer head assembly, that includes the bonding of multiple layers of metal to metal or metal to plastic in the production of electronic components or magnetic components, in which the bond line(s) is less than 0.25 mil.
76. "Tire Repair": The repair of a hole, tear, fissure, or blemish in a tire casing by grinding or gouging, applying adhesive or sealant product and filling the hole or crevice with rubber.
77. "Tire Retread": The process of tire retreading is where adhesives are applied to the back of precured tread rubber and to the casing and cushion rubber. It may also be used to seal buffed tire casings to prevent oxidation while the tire is being prepared for a new tread.
78. "Top and Trim Adhesive": Any adhesive used to install automotive and marine trim, including, but not limited to headliners, vinyl tops, vinyl trim, sunroofs, dash covering, door covering, floor covering, panel covering, and upholstery.
79. "Traffic Marking Tape": A preformed reflective film intended by the manufacturer to be applied to public streets, highways, and other surfaces, including but not limited to curbs, berms, driveways and parking lots.
80. "Traffic Marking Tape Adhesive": Any adhesive intended by the manufacturer to be applied to surfaces prior to installation of traffic marking tape.
81. "Undersea Based Weapons Systems Components": The fabricated part, assembly of parts or completed units of any portion of the missile launching system used on undersea ships.
82. "VCT and Asphalt Tile Adhesive": Any adhesive intended by the manufacturer for the installation of Vinyl Composite Tile (VCT) or asphalt tile flooring. Vinyl composite tile is a material made from thermoplastic resins, fillers, and pigments.

83. "Vehicle Glass Adhesive Primer": Any primer intended by the manufacturer to be applied to vehicle glass or to the frame of a vehicle prior to the installation or repair of the vehicle glass using an adhesive or sealant to improve adhesion to the pinch weld.
84. "Volatile Organic Compound (VOC)": Shall have the same meaning as Reactive Organic Compounds (ROC) as defined in Rule 2 of these Rules.
85. "Waterproof Resorcinol Glue": Any two-part, resorcinol resin-based adhesive intended by the manufacturer to be used in applications where the bond line must be resistant to conditions of continuous immersion in fresh or salt water.
86. "Wood Flooring Adhesive": Any adhesive intended by the manufacturer for the installation of wood flooring, which may include but is not limited to parquet tiles, wood planks, or strip-wood.

ATTACHMENT 4
VENTURA COUNTY APCD FINAL STAFF REPORT
Proposed Amendments to Rule 74.20, Adhesives and Sealants
October 9, 2018

EXECUTIVE SUMMARY

Staff is proposing amendments to Rule 74.20 to reduce Reactive Organic Compound (ROC) emissions from the use of adhesives, sealants, and adhesive primers. This rule applies to any person that uses, supplies, sells, offers for sale, or manufactures these adhesive products in the county. The emission reductions are based on proposed lower ROC content limits for specific product categories of adhesives, sealants, and adhesive primers.

This rule development will implement an All Feasible Measure as required by the California Clean Air Act (HSC Section 40914). Both the Ventura County APCD's 2016 Air Quality Management Plan (AQMP) and the 2015 Ventura County Triennial Assessment and Plan Update rely on adopting All Feasible Measures to help attain the state ambient ozone air quality standard.

The proposed changes to existing ROC content limits for specific categories of adhesives and sealants are based on the most recent amendments to South Coast AQMD Rule 1168 (October 2017). The last significant changes were made to these product category standards on September 9, 2003, also based on SCAQMD Rule 1168. This proposal does not include those adopted future VOC limits in Rule 1168 that require SCAQMD to conduct a technology assessment prior to the implementation date for those VOC limits.

Technology assessments are conducted by SCAQMD to review the technical and economic feasibility of a proposed standard to insure the viability of an adhesive product in meeting that standard. Rather than adopting these technology-forcing standards at this time, staff will review these future technology assessments prior to proposing these standards in the future. Many new adhesive products comply with the proposed standards and are available at retail locations as determined by a recent staff survey.

Rule 74.20 is a relatively complex rule because it regulates the ROC content of adhesives at both permitted stationary sources (typically manufacturing operations) and area sources (such as commercial construction and do-it-yourself projects). This rule identifies construction adhesive categories, often sold at hardware and big box home improvement stores in many different product categories, each with its own ROC content limit (Subsection B.2). These categories are typically based on the purpose of the

adhesive (what is being bonded). If an adhesive can be defined by one of the product categories in Subsection B.2, then the corresponding ROC content standard in that section applies.

If an adhesive or adhesive primer cannot be identified by one of the product categories in Subsection B.2, then the ROC content standard will depend on the type of substrate being bonded (Subsection B.3). Subsection B.1 identifies a default adhesive or adhesive primer ROC content limit of 250 g/l, unless a higher standard is allowed under an applicable product category (Subsection B.2). Both the substrate ROC standards (Subsection B.3) and the default 250 g/l adhesive standard (Subsection B.1) will not change under this proposal.

The proposed revisions to Rule 74.20 will affect unpermitted or area sources using adhesives and sealants for residential or commercial construction or remodeling. The estimated ROC reductions from this proposal are approximately 15 tons of ROC per year and over 99 percent of these emission reductions are from unpermitted area source reductions. The existing Rule 74.20 has a sales prohibition aimed at area source noncomplying adhesives, and this provision is the most effective means of regulating emissions from these products with limited staff resources. The Air Resources Board also regulates the sale of adhesives and sealants (under the Consumer Products Regulation), but their sales prohibition is limited to products that are one pound (16 ounces net weight) or less, except for plastic welding products, which are subject to Rule 74.20.

There are only eleven permitted manufacturing facilities subject to Rule 74.20 ROC content standards for adhesives, and this proposal should not significantly impact their operations. Two of the sources (Pentair Pool Products and Waterway Plastics) currently use plastic welding adhesives that are regulated under adhesive product categories in Subsection B.2. This proposal reduces the ROC content limit for bonding ABS plastics from 400 to 325 g/l, which is the current limit in SCAQMD Rule 1168. This change should not impact their operations because high-performance ABS bonding adhesives are currently available at 325 g/l.

The South Coast AQMD performed a cost analysis for their October 2017 amendment to Rule 1168 by comparing the cost of complying adhesives with their

non-complying counterparts. This cost differential was used to estimate manufacture reformulation costs, which assumes any cost increases are passed on to customers. The cost-effectiveness for product reformulations ranged from \$0.40 to \$3.70 per pound of ROC reduced. There are currently no adhesive manufacturers in Ventura County. Since almost all of these adhesive products are currently being sold in county retail stores, the actual cost increase to local residents from these proposed rule amendments is negligible.

In order to further reduce ROC emission under the proposed amendments to Rule 74.20 and to provide some uniformity with neighboring South Coast AQMD, six new product categories (adhesives, adhesive primer, and sealants) were created (Table 1). All of these new product categories are clearly defined in Section G of the rule. In addition, eight existing product categories have ROC content limits that are proposed to be lowered (Table 2) to provide emission reductions. The specifics of this proposal will be presented in the Proposed Rule Requirements section of this report.

Table 1 – Summary of New Proposed Product Categories in Subsection B.2 (g/l)

NEW PRODUCT CATEGORY	Proposed ROC Limit(g/l)	Rule 74.20 Effective Date	SCAQMD ROC Limit	SCAQMD Effective Date
Waterproof Resorcinol Glue	170	Upon Adoption	170	1-1-2019
ABS to PVC Transition Cement	510	Upon Adoption	510	Current Limit
Pressure Sensitive Adhesive Primer	785	Upon Adoption	785	Current Limit
Aerosol Insulating Foam Sealant	250	Upon Adoption	250	Current Limit
			50	1-1-2023
Non-Staining Plumbing Putty	150	7-1-2019	150	Current Limit
	50	1-1-2023	50	1-1-2023
Potable Water Sealant	100	7-1-2019	100	Current Limit

Table 2 – Summary of New Proposed ROC Content Limits in Subsection B.2(g/l)

PRODUCT CATEGORY	CURRENT ROC LIMIT	PROPOSED ROC LIMIT	Rule 74.20 Effective Date	SCAQMD VOC Limit	SCAQMD Effective Date
Outdoor Carpet Adhesive	150	50	7-1-2019	50	1-1-2019
Wood Flooring Adhesive	100	20	1-1-2023	20	1-1-2023
Other Flooring Adhesive	150	50	7-1-2019	50	1-1-2019
ABS Welding Adhesive	400	325	7-1-2019	325	Current Limit
Plastic Welding Primer	650	550	7-1-2019	550	Current Limit
All Other Roof Sealants	420	300	7-1-2019	300	Current Limit
				250	1-1-2023
All Other Architectural Sealants(Non-Roof)	250	50	7-1-2019	50	1-1-2019
All Other Sealants (Non-Architectural)	420	250	1-1-2023	250	1-1-2023

This report contains five additional sections: (1) Background, (2) Proposed Rule Requirements, (3) Comparison of Proposed Rule Requirements with Other Air Pollution Control Requirements, (4) Impact of the Proposed Rule, and (5) Environmental Impacts of Methods of Compliance/CEQA.

The first section provides background information including regulatory history, air pollution control technology and source description. The second section explains the key features of the proposed revisions to Rule 74.20. The third section compares the proposed requirements with existing federal

requirements (Control Techniques Guideline Document) and Best Available Control Technology (BACT). The fourth section is an analysis of the proposed amendment's effect on ROC emissions, cost-effectiveness, and socioeconomic impacts. The last section examines the environmental impacts of compliance methods and the mitigations of those impacts.

BACKGROUND

Introduction

Ventura County APCD Rule 74.20, Adhesives and Sealants, was adopted on June 8, 1993, and the product category ROC content limits have not been revised since September 9, 2003. The September 11, 2012, revision focused strictly on reducing ROC emissions from the use of solvents used for surface preparation of bonding surfaces and cleanup of adhesive spray equipment.

The California Clean Air Act (Health and Safety Code Section 40914) requires that nonattainment air districts for ambient ozone adopt All Feasible Measures to help attain the state standard. The California Air Resources Board has published guidelines to assist with the determination of the feasibility of a control measure. One of the factors is the successful implementation of a control measure by another California air district. In this case, staff is proposing to adopt amendments to Rule 74.20 based on the most recent amendments to South Coast AQMD Rule 1168, but excluding those future ROC content limits that are subject to the results of a future technology assessment. These adhesive product standards with mandatory technology assessment provisions are marked by footnotes in the SCAQMD Rule 1168 text.

Staff also evaluated the feasibility of the proposed amendments by surveying local retail outlets to determine the current availability of adhesives on retail shelves that will meet the proposed ROC content limits. When the adhesives rules were adopted in 1990s, the manufacturers were required to put ROC content limits on product container labels. Since Ventura County is part of the adhesive

marketing territory of Southern California, products shipped into the county normally meet the more stringent requirements of the South Coast AQMD, as long as these products are viable and have consumer acceptance. The survey indicated that the adhesive products are available that comply with the proposed ROC content limits.

Adhesive and Sealant Operations

The ROC emissions from persons or sources using adhesives and sealants are based on organic solvent evaporation from the use of adhesives, sealants, adhesive primers, and solvent cleaners. The reduction of emissions from adhesives is achieved similarly to techniques used to reduce emissions from coatings. Basically, organic solvent-based adhesives are replaced with water-based, acetone (or other exempt organic solvent)- based adhesive, or high-solid adhesives such as hot-melt adhesives.

Emission Inventory

The adhesive operations currently permitted by APCD and subject to Rule 74.20 are shown in Table 3. This table provides the permitted emissions from each of the eleven permitted sources, and the total permitted ROC emissions are 10.76 tons per year.

According to the most recent emission inventory (2016), the ROC emissions from adhesives and sealants are approximately 150 tons of ROC per year. Therefore, more than 95 percent of the emissions from adhesives are from area or non-permitted sources including building and plumbing contractors, and do-it-yourself homeowners.

Table 3 - Permitted Adhesive Operations in Ventura County

FACILITY NAME	PERMITTED EMISSIONS (TONS/YEAR)	TYPE OF OPERATION	SIC CODE
California Amplifier	2.95	Communication Equipment	3663
Drum Workshop	0.50	Musical Instruments	3931
ERG International	0.84	Commercial Furniture	2522
Freedom Designs	0.42	Medical Supplies	3842
Ricoh Printing	0.42	Inkjet Print Heads	3955
Milgard Manufacturing	0.94	Window Manufacturer	3211
Parker Hannifin	0.36	Industrial Machinery	3569
Pentair Pool Products	2.37	Swimming Pool Equipment	3648
Robbins Auto Top	1.10	Vehicle Convertible Top Manufacture	3711
Santa Maria Tire	0.18	Truck Tire Retreading	7534
Waterway Plastic	0.68	Plastic Plumbing Fixtures	3088
TOTAL ROC EMISSIONS	10.76		

PROPOSED NEW RULE REQUIREMENTS

Adhesives, Sealants, Adhesive Primers, and Sealant Primers (Section B.2)

The proposed amendments to ROC content limits for specific applications (also called product categories) are based on the October 2017 amendments to South Coast AQMD Rule 1168. This proposal does not include future ROC content limits that have been identified in SCAQMD Rule 1168 as requiring a technology assessment prior to their implementation date (marked by footnotes in SCAQMD Rule 1168).

Ceramic, Porcelain & Stone Tile Adhesive:

Originally this category only regulated the ROC content of ceramic tile adhesives. The scope of this category has been extended to include adhesives used to bond porcelain and stone tiles with no proposed changed to the existing 65 g/l ROC content limit.

Flooring Adhesive (Outdoor Carpet): The ROC content of adhesives intended to bond outdoor carpets is proposed to be lowered from 150 to 50 g/l. According to SCAQMD survey from their 2017 staff report, the sales weighted average ROC for this category is 15 g/l. Examples of available outdoor carpet adhesives complying with the proposed 50 g/l limit are shown in Table 4.

Wood Flooring Adhesive: The ROC content of adhesives intended to bond wood flooring is proposed to be lowered from 100 to 20 g/l with a future effective date of January 1, 2023. According to the SCAQMD survey, the current sales weighted average ROC is 51 g/l. Examples of available wood flooring adhesives complying with the proposed 20 g/l limit are shown in Table 5.

Other Flooring Adhesive: The ROC content of flooring adhesives not defined under any flooring adhesive category is proposed to be lowered from 150 to 50 g/l. According to the SCAQMD survey, the current sales weighted average is 18 g/l for other indoor flooring and 15 g/l for other outdoor flooring.

Waterproof Resorcinol Glue: This is a new adhesive product category with a proposed ROC content limit of 170 g/l. This adhesive is defined as a two-part resorcinol resin-based adhesive intended for applications where the bond line is resistant to continuous immersion in water.

ABS Plastic Welding Adhesive: The ROC content of ABS plastic welding adhesives is proposed to be lowered from 400 to 325 g/l. According to the SCAQMD survey, the sales weighted average ROC is 325 g/l. This proposed change to ABS plastic welding ROC content limit is based on a current limit in SCAQMD Rule 1168 that has been in effect since 2005. This proposed amendment should not impact the two permitted stationary sources that apply plastic welding adhesives because of the availability of high performing ABS plastic welding adhesives. Examples of available ABS plastic welding adhesives complying with the proposed 325 g/l limit are shown in Table 6.

ABS to PVC Transition Cement: This is a new adhesive category with a proposed ROC content limit of 510 g/l, which is the current SCAQMD limit. This adhesive category is defined as any plastic welding adhesive that is intended to bond ABS to PVC plastics. The future SCAQMD limit of 425 g/l effective January 1, 2023, will require that a technology assessment be performed, and this limit is not being proposed at this time.

Plastic Welding Primer: The ROC content of plastic welding primer is proposed to be lowered from 650 to 550 g/l. This new standard is based on an ROC content limit in SCAQMD Rule 1168 that been in effect since 2005. According to the SCAQMD survey, the current sales weighted average is 546 g/l. Examples of available plastic welding primers complying with the proposed 550 g/l limit are shown in Table 7.

Pressure Sensitive Adhesive Primer: This is a new category with a proposed ROC content limit of 785 g/l. This category is defined as any adhesive primer intended by the manufacturer to be applied to the substrate receiving a pressure sensitive adhesive product and results in the increased adhesion or shorter cure times of the applied product. The proposal defines pressure sensitive adhesive as any adhesive intended by the manufacturer to form a bond when pressure is applied (without the need for solvent, water, or heat) and is typically applied to backings or release liners.

Aerosol Insulating Foam Sealant: The ROC content of aerosol insulating foam sealant is proposed at 250 g/l, and is based on a current ROC content limit in SCAQMD Rule 1168. However, the future limit of 50 g/l in SCAQMD Rule 1168 is not being proposed in Ventura County because a technology assessment is required by the SCAQMD rule. According to the SCAQMD survey, the current sales weighted average is 152 g/l. Examples of available aerosol insulating foam sealants complying with the proposed 250 g/l limit are shown in Table 8.

Non-Staining Plumbing Putty: This is a new sealant category with a proposed initial ROC content limit of 150 g/l effective July 2019 and future ROC content limit of 50 g/l effective January 1, 2023. This category is defined as a type of plumber's putty that is formulated by the manufacture to avoid staining and for use on granite, marble, quartz, sandstone, or other natural porous surfaces. Examples of non-staining plumbing putty complying with the proposed the near term 150 g/l limit are shown in Table 9.

Potable Water Sealant: This is a new sealant category with a proposed ROC content limit of 100 g/l. This is defined as a sealant that may be used on potable water components, which must comply with NSF/ANSI Standard 61- Drinking Water Components, Health Effects.

All Other Roof Sealants: The ROC content for all other roof sealants category is proposed to be lowered from 420 to 300 g/l. This new standard is based on the current ROC content limit in SCAQMD Rule

1168. According to the SCAQMD survey, the sales weighted average ROC content was 219 g/l for this category. Examples of non-membrane roof sealants complying with the proposed 300 g/l limit are shown in Table 10. The future SCAQMD limit of 250 g/l effective January 1, 2023, will require that a technology assessment be performed, and this limit is not being proposed at this time.

All Other Architectural Sealants (Non-Roof): The ROC content limit for this category is proposed to be lowered from 250 to 50 g/l. This new standard is identical to a proposed ROC content limit of 50 g/l effective January 1, 2019, in SCAQMD Rule 1168. The SCAQMD survey showed that the sales weight average ROC content for this category was 65 g/l. Examples of architectural sealants not intended for roof applications that comply with the proposed 50 g/l limit are shown in Table 11.

All Other Sealants (Non-Architectural): The ROC content limit for this category is proposed to be lowered from 420 to 250 g/l effective January 1, 2023. This is identical to the SCAQMD Rule 1168 proposed future limit of 250 g/l effective in 2023, which is about five years from now. Although the current sales weighted average ROC content from the SCAQMD survey was 326 g/l, examples of existing complying sealants in this category are shown in Table 12.

Table 4 - Examples of Available Outdoor Flooring Adhesives

NAME OF PRODUCT	APPLICATION	Product ROC (g/l)	Proposed ROC Limit
Advanced Adhesive Technologies(AAT-390)	Exterior adhesive	Solvent-free	50
Roberts 6700	Indoor/outdoor carpet/artificial turf	<1	50
Titebond Solvent Free	Indoor/outdoor carpet & tile	50	50
TEC Outdoor Carpet Adhesive	Indoor/outdoor carpet/artificial turf	0	50

Table 5 - Examples of Available Wood Flooring Adhesives

NAME OF PRODUCT	APPLICATION	Product ROC (g/l)	Proposed ROC Limit
Bostik Single App	Wood flooring	0	20
Bostik WoodGrip Plus	Wood flooring	8	20
Henry 1171-N	Wood flooring	16	20
Roberts 1407	Wood flooring	<1	20
Roberts 1509	Wood flooring	0	20
Roberts 1535	Wood flooring	0	20
Taylor 2071	Wood flooring	Solvent-free	20
Taylor MS Plus	Wood flooring	Solvent-free	20

Table 6 - Examples of Available ABS Welding Adhesives

NAME OF PRODUCT	APPLICATION	Product ROC (g/l)	Proposed ROC Limit
Oatey Black ABS Plastic Adhesive	ABS Plastic Welding	325	325
IPS Weldcraft ABS Plastic Adhesive	ABS Plastic Welding	325	325

Table 7 - Examples of Available Plastic Welding Primers

NAME OF PRODUCT	APPLICATION	Product ROC (g/l)	Proposed ROC Limit
Oatey Purple Primer/Cleaner	Plastic Welding Primer	180	550
Oatey Purple Primer (1402-E)	Plastic Welding Primer	505	550
Oatey Clear Primer (1402-E)	Plastic Welding Primer	505	550
Oatey Industrial Grade Primer	Plastic Welding Primer	520	550
Weld-On P-68 Primer	Plastic Welding Primer	<550	550
Weld-On P-70 Industrial Grade Primer	Plastic Welding Primer	<550	550
Weld-On P-75 Wet R Dry Primer	Plastic Welding Primer	<550	550
Weld-On Pool Primer	Plastic Welding Primer	<550	550
Weld-On PC-64 Low VOC Primer/Conditioner	Plastic Welding Primer	<550	550

Table 8 - Examples of Available Aerosol Insulating Foam Sealants

NAME OF PRODUCT	APPLICATION	Product ROC (g/l)	Proposed ROC Limit
Clayton Touch N Foam	Aerosol Foam Sealant	155	250
DAPtex Plus Multi-Purpose Foam Sealant	Aerosol Foam Sealant	167	250
Henkel OSI WINTeQ Foam	Aerosol Foam Sealant	177	250
Red Devil Foam & Fill Minimal Expanding	Aerosol Foam Sealant	150	250
Red Devil Foam & Fill Triple Expanding	Aerosol Foam Sealant	150	250

Table 9 - Examples of Available Non-Staining Plumbing Putty Sealant

NAME OF PRODUCT	APPLICATION	Product ROC (g/l)	Proposed ROC Limit Effective 7-1-2019	Proposed ROC Limit Effective 1-1-2023
Hercules Plumbing Putty Caulk	Plumbing	48	150	50
Oatey Stain-Free Putty	Plumbing	87	150	50
PC Plumbing Putty Epoxy	Plumbing	19	150	50

Table 10 - Examples of All Other (Non-Membrane) Roof Sealants

NAME OF PRODUCT	APPLICATION	Product ROC (g/l)	Proposed ROC Limit
DAP Watertight Roof Sealant	Roof	181	300
Franklin Titebond Metal Roof Sealant	Roof	9	300
Henkel Loctite PL S30 Polyurethane Sealant	Metal Flashing	35	300

Table 11 - Examples of Architectural Sealants (Non-Roof)

NAME OF PRODUCT	APPLICATION	Product ROC (g/l)	Proposed ROC Limit
3M Fire-Block Sealant FB 136	Structure: Fire Barrier	Zero	50
3M Fire Barrier Sealant IC 15WT+	Structure: Fire Barrier	14.5	50
DAP 3.0 Advanced Sealant	Window/Door/Siding	4.2	50
DAP 3.0 Advance Sealant	Kitchen/Bath/Plumbing	4.2	50
DAP Clear 100% Silicone Sealant	Multipurpose	30	50
DAP Dyna Flex 230	Multipurpose	38	50
DAP Concrete/Masonry Sealant	Concrete/Masonry	3.5	50
DAP Sidewinder Advanced Polymer	Siding/Window	3.8	50
DAP Watertight Concrete Sealant	Concrete	36.3	50
Design Polymerics Grey Duct Sealant	Ducts	Zero	50
G.E. Silicone Sealant	Multipurpose	33	50
Henkel Loctite PL S40 Polyurethane Sealant	Window/Door/Siding	35	50
Henkel Loctite Polyurethane Sealant	Concrete Crack/Masonry	33	50
OSI White Draft & Acoustical Sound Sealant	Multipurpose	45	50
OSI White Polyurethane Sealant	Concrete	34	50
QuickKrete Polyurethane Sealant	Concrete	34	50
Red Devil Acrylic Latex Sealant	Multipurpose	<25	50
Red Devil Clean Silicone Sealant	Multipurpose	<10	50
Red Devil RD 3000 Sealant	Kitchen/Bath	<35	50
US Gypsum Co. Durock Sealant	Durock Shower Systems	15	50

Table 12 - Examples of All Other Sealants (Non-Architectural)

NAME OF PRODUCT	APPLICATION	Product ROC (g/l)	Proposed ROC Limit
Stabond Corporation STASEAL 5000B	Industrial/Aerospace	49	250
3M Urethane Seam Sealant	Metal/Primed Metal/Painted	93	250
3M Heavy Bodied Seam Sealant	Automotive/RV	12	250
3M Bare-Metal Seam Sealant	Automotive/RV	14	250
3M All Around Autobody Sealant	Automotive	22	250
3M Urethane Seam Sealant	Automotive	129	250
3M 8509 Glazing Compound	Windshield Sealant	129	250

PROPOSED NEW RULE REQUIREMENTS (Continued)

**Compliance Statement Requirement
(Section B.12)**

This proposed revision will allow manufacturers the option to determine the maximum ROC content of their products using product formulation data rather than the appropriate test method. A similar provision has been adopted in SCAQMD Rule 1168, and it provides industry with the flexibility to determine the most cost-effective approach to the determination of the compliance status of their products.

**Sell-Through and Use-Through Provision
(Section B.15)**

This is a new provision that allows the sale and use of adhesives or sealants that do not comply with future ROC content limits in Subsection B.2, as long as the product is manufactured prior to its future effective date and the manufacturer provides a manufacture date on the label or provides the APCD with a corresponding date code. This provision allows these products to be sold up to three years after the specified effective date and to be used up to four

years after the specified effective date. This provision does not apply to products subject to current ROC content limits. This provision is based on a similar provision in SCAQMD Rule 1168.

Exemptions (Section C)

Staff is proposing to remove an exemption from the ROC limit of Subsection B.1, B.2, and B.3 for plaque lamination operations where adhesives are used to bond a clear polyester acetate laminate to wood with lamination equipment installed prior to July 1, 1992. This exemption was included in the original 1993 rule adoption to grandfather an existing source operation from the new rule requirements. Since this business has now closed, there is no longer any need for this exemption.

A new exemption from the ROC content limits in Subsection B.1, B.2, and B.3, is proposed for the field installation or repair of potable water linings and covers at water treatment, water storage, or water distribution facilities (Subsection C.3.e). Also, a new exemption from all rule provisions is proposed for adhesive tape (Subsection C.4.d). Both of these proposed exemptions are based on similar exemptions in SCAQMD Rule 1168.

Two new exemptions are proposed in Section C.4, which applies to specific adhesives or sealants. The proposed exemptions apply to two different types of spray polyurethane foam systems. The first type (Section C.4.e) applies to any low pressure (less than 250 psi) or high pressure (1,000 to 1,300 psi) two-component spray system that uses exempt organic compounds as the blowing agent and that uses ancillary spray equipment and hoses to apply the foam. The second type (Section C.4.f) applies to one-component spray systems from a cylinder

(containing not less than 10 pounds and not more than 23 pounds of prepolymerized mixtures) that also uses exempt organic compounds as the blowing agent and ancillary spray equipment or hoses to apply the foam. These foam products have low ROC emissions because they are formulated with exempt organic compounds. The definition of exempt organic compounds in Section G has been modified to include the latest exempt blowing agents.

Test Methods (Section E)

This proposal includes the option of using the following additional test methods to determine the ROC content of adhesive products, sealants, primers, or cleaning solvents (Subsection E.1):

- SCAQMD Lab Method 304, Determination of VOC in Various Materials
- SCAQMD Lab Method 313, Determination of VOC by Gas Chromatography-Mass Spectrometry

In addition, SCAQMD Lab Method 303 would be allowable for determining exempt organic compounds. (Subsection E.2).

This proposal includes a new test method to determine the ROC content of reactive adhesives. This new test method is EPA Method Appendix A to Subpart PPPP of Part 63 – Determination of Weight Volatile Matter Content and Weight Solids Content of Reactive Adhesives. This method is a sandwich method where the adhesive cures between two substrates to prevent moisture in the atmosphere from competing with the reaction taking place in the adhesive. This method may not be used for one-part moisture-cured urethanes, silicone adhesives or reactive sealants. (Subsection E.6)

COMPARISON OF PROPOSED RULE REQUIREMENTS WITH OTHER AIR POLLUTION CONTROL REQUIREMENTS

Health and Safety Code Section 40727.2 requires Districts to compare the requirements of a proposed revised rule with other air pollution control requirements. These other air pollution control requirements include federal New Source Performance Standards (NSPS), federal National Emissions Standards for Hazardous Air Pollutants (NESHAPS), Best Available Control Technology (BACT), and any other District rule that applies to the same equipment.

In September of 2008, EPA adopted a Control Techniques Guideline (CTG) for Miscellaneous Industrial Adhesives. In 2009, the Ozone Transport Commission (OTC) adopted a Model Rule for Adhesives. The proposed amendments to Rule 74.20 exceed the requirements recommended by both EPA and OTC. In fact, these guidelines relied on rule adoptions by Ventura County and other California air districts.

A review of current BACT determinations from the South Coast AQMD and California Air Resources Board indicates that BACT for this source category is based on existing SCAQMD Rule 1168, which is the basis for this rule amendment proposal.

With the exception of Ventura County APCD Rules 74.13(Aerospace Manufacturing Operations), 74.19 (Graphic Arts), and Rule 74.19.1 (Screen Printing),

there are no other APCD rules applying to adhesive operations. Adhesives subject to these rules are already exempt from the requirements in Rule 74.20. In summary, there are no conflicts between proposed amendments to Rule 74.20 and any other pertinent air pollution control regulations.

IMPACT OF THE PROPOSED RULE

ROC Emissions Impacts

The estimated ROC emission reductions of 15 tons per year from this source category are significant, and all emission reductions are needed to reach the federal and state ambient ozone air quality standards. Over 99 percent of these emission reductions will come from non-permitted area sources, which explains the existence of a prohibition of sale in the current rule. The proposed standards rely on existing adhesive and sealant products that have already been reformulated in low-ROC versions.

Cost-Effectiveness

The South Coast AQMD performed a cost analysis for their October 2017 amendment to Rule 1168 by comparing the cost of complying adhesives with their non-complying counterparts. This cost differential was used to estimate manufacture reformulation costs, which assumes any cost increases are passed on to customers. The cost-effectiveness for product reformulations ranged from \$0.40 to \$3.70 per pound of ROC reduced. There are currently no adhesive manufacturers in Ventura County. Since almost all of these adhesive products are currently being sold in county retail stores, the actual cost increase to local residents from these proposed rule amendments is negligible.

In addition, this proposal does not rely on the use of expensive ROC emission add-on control devices to meet the proposed emission standards. Although the existing rule does allow add-on controls as a compliance option, there are no such controls on existing adhesive operations in the county, and none are anticipated based on the current availability of low ROC adhesives and sealants.

Incremental Cost-Effectiveness Analysis

Health and Safety Code Section 40920.6(a) requires districts to identify one or more potential control options, assess the cost-effectiveness of those options, and calculate the incremental cost-effectiveness. Health and Safety Code Section 40920.6 also requires an assessment of the incremental cost-effectiveness for proposed regulations relative to ozone, carbon monoxide (CO), sulfur oxides (SOx), nitrogen oxides (NOx), and their precursors.

Incremental cost-effectiveness is defined as the difference in control costs divided by the difference in emission reductions between two potential control options achieving the same emission reduction goal of a regulation.

The estimated incremental cost-effectiveness analysis is summarized in Table 13, and is based on the comparison between the proposed amendments to Rule 74.20 (Proposed Option) and a more stringent option to adopt all SCAQMD Rule 1168 future ROC limits, effective January 1, 2023, specifically those requiring a future technology assessment (Technology Forcing Option). The projected costs are based on estimates of product reformulation costs, which may be passed down to the retail customer. There are no adhesive manufacturers in Ventura County, and the reformulated products were estimated in the South Coast AQMD staff report in their October 2017 adoption of amendments to Rule 1168. The calculated incremental cost-effectiveness for this scenario is \$10.99 per pound of ROC reduced. In comparison, new sources of air pollution in the county are required to spend up to \$9 per pound of ROC reduced to implement Best Available Control Technologies.

Table 13 – Incremental Cost-Effectiveness Analysis

Proposed Amendments to Rule 74.20	Projected Costs (Based on Reformulation) = \$61,500	Projected Emission Reductions 30,000 lbs ROC/year
ROC Control Option: Full Implementation of SCAQMD Rule 1168 Future Limits	Projected Costs (Based on Reformulation) \$347,200	Projected Emission Reductions 56,000 lbs ROC/year
Incremental Cost-Effectiveness	Cost Difference Emission Difference	\$347,200-\$61,500/year 56,000-30,000 lb ROC/year
		\$285,700/year 26,000 lb ROC /year
		\$10.99 / lb ROC reduced

Socio-Economic Impacts

Assembly Bill 2061 (Polanco), which became effective January 1, 1992, requires that the District Board consider the socioeconomic impacts of any new rule. The Board must evaluate the following socioeconomic information on proposed amendments to Rule 74.20.

- (1) The type of industries or businesses, including small business, affected by the rule or regulation.
The amendments to this rule may directly affect the eleven permitted adhesive operations in the county (see Table 3), and it may impact retail businesses that sell adhesive and sealants. These retailers range from big box outlets to small business hardware stores.

- (2) The impact of the rule amendments on employment and the economy of the region.

Adoption of this new rule is not expected to have a negative impact on either employment or the economy of Ventura County. Worst-case cost estimates for the end user are not significant enough to impact employment. By limiting the proposal to currently available adhesive and sealant products, the cost impacts will be reduced, which will minimize economic effects.

- (3) The range of probable costs, including costs to industry or business, including small business, of the rule or regulation.

Based on an SCAQMD staff analysis of product reformulation costs, the probable cost-effectiveness ranges from \$0.40 to \$3.70 per pound of ROC reduced. However, there are no adhesive manufacturers in the county, and almost all these products are currently being

sold here. Thus, the probable costs of the proposal on business will be negligible.

- (4) The availability and cost-effectiveness of alternatives to the rule or regulation being proposed or amended.

The current proposal is the most cost-effective option for reducing ROC emissions from the use of adhesives and sealants. The alternative of adopting future ROC limits which require future technology assessments is costlier and is a technology-forcing option.

- (5) The emission reduction potential of the rule.

The anticipated emission reduction potential of the proposed rule is about 15 tons per year of ROC emissions. Almost all these emission reductions are from the sale of low-ROC adhesives and sealants sold to non-permitted area sources rather than those eleven adhesive operations permitted by APCD.

- (6) The necessity of adopting, amending, or repealing the rule or regulation in order to attain state and federal ambient air standards pursuant to Chapter 10 (commencing with Section 40910).

Ventura County is classified as a nonattainment area for the federal Ambient Air Quality Standards for ozone. This proposed new rule will reduce ROC emissions that are precursors to the formation of ozone. According to the 2016 AQMP, these emission reductions will help the District in its effort to attain the ozone standards. California Health and Safety Code Section 40914(b)(2) requires that the District adopt every feasible measure to reduce ozone precursors.

ENVIRONMENTAL IMPACTS OF METHODS OF COMPLIANCE

California Public Resources Code Section 21159 requires the District to perform an environmental analysis of the reasonably foreseeable methods of compliance. The analysis must include the following information on proposed new amendments to Rule 74.20.

- (1) An analysis of the reasonably foreseeable environmental impacts of the methods of compliance.
- (2) An analysis of the reasonably foreseeable mitigation measures.
- (3) An analysis of the reasonably foreseeable alternative means of compliance with the rule or regulation.

Table 14 lists all reasonably foreseeable compliance methods, the environmental impacts of those methods, and measures that could be used to mitigate the environmental impacts.

Table 14 - Environmental Impacts and Mitigations of Methods of Compliance

Compliance Methods (including all reasonably foreseeable alternative means of compliance)	Reasonably Foreseeable Environmental Impacts	Reasonably Foreseeable Mitigation Measures
Reformulation of adhesives	Air Quality Impacts: Reformulation may result in the use of toxic materials.	Operators may use reformulated products with less or no toxic materials.
	Human Health Impacts: Reformulation of adhesives may result in the use of toxic compounds.	Compliance with OSHA safety guidelines (e.g. personal protective equipment, prevention, and response, emergency first aid procedures) reduces these impacts.
Installation of Catalytic Oxidation Add-on Controls	Solid Waste Disposal Impacts: May increase quantities of solid waste (spent catalyst material).	Catalyst materials are usually valuable and are typically reclaimed and recycled.
	Noise Impacts: Fans and associated equipment with add-on controls may increase noise levels.	Sound wall or enclosures may be constructed around the control equipment.

This analysis demonstrates that the adoption of proposed amendments to Rule 74.20 will not have a significant effect on the environment due to unusual circumstances. The amendments overall reduce emissions by an estimate of 15 tons per year of ROC, and are thus categorically exempt from CEQA under Section 15307 and 15308 of the state CEQA Guidelines.

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DISCLAIMER

This report contains references to company and product names to illustrate product availability. Mention of these names is not to be considered an endorsement by the Ventura County Air Pollution Control District.